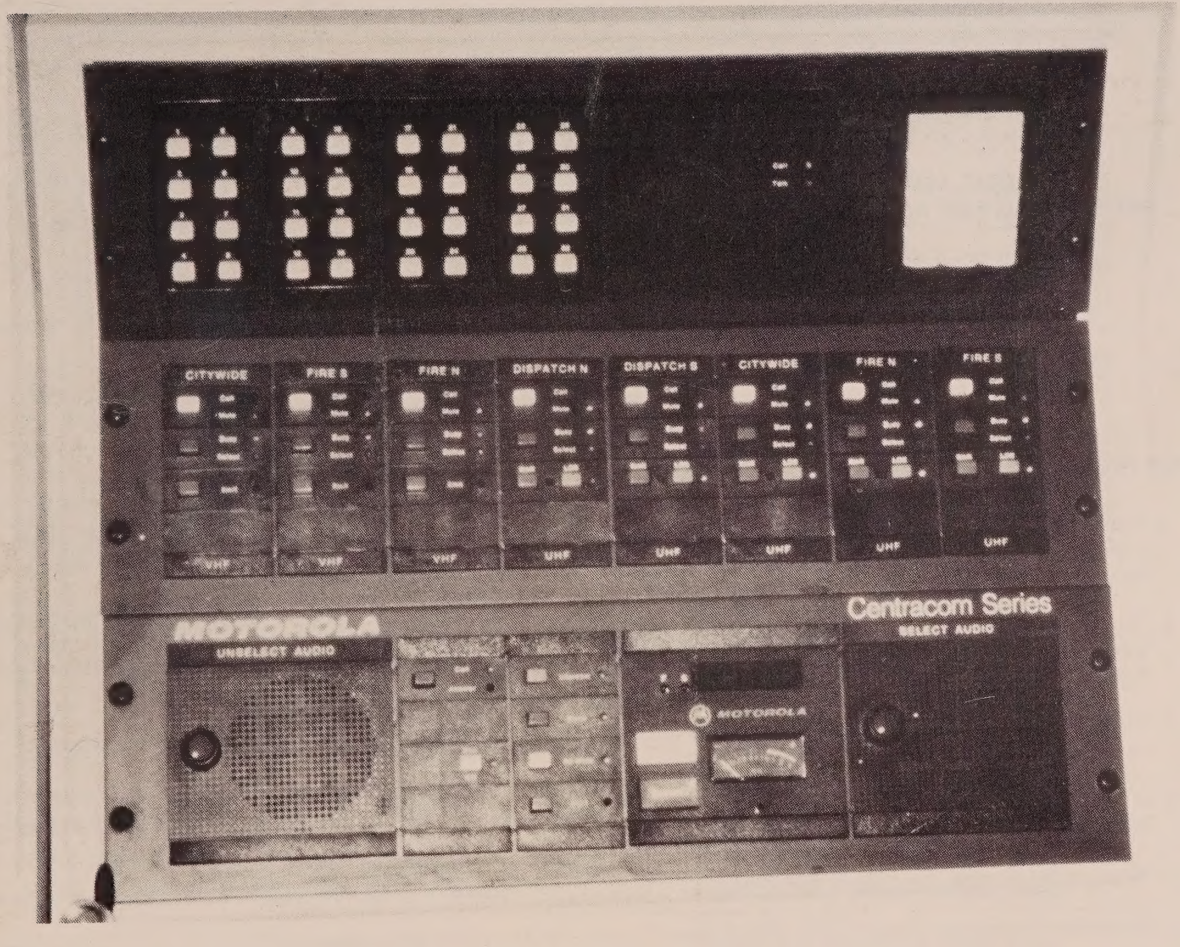
RCMA

NEWSLETTER

SEPTEMBER 1986



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RCMA NEWSLETTER

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Manhattan Beach, CA 90266-8198

FOR YOUR INFORMATION:

1. Input to the RCMA Newsletter must be mailed to the proper editors, whose addresses are included in the individual column headlines. If no particular column seems appropiate, send input to RCMA, P.O. Box 1198, Manhattan Beach, CA 90266-8198

2. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address on it; mail to RCMA General Manager, P.O. Box 542, Silverado, CA 92676.

3. PLEASE INCLUDE YOUR RCMA MEMBERSHIP NUMBER WITH ALL CORRESPONDENCE to newsletter editors or club headquarters.

4. If you require a reply when writing to RCMA headquarters or to one of the editors, you MUST enclose a self-addressed, stamped envelope.

5. Please write on only one side of the paper.

6. Please don't combine in one letter several items that should go to different addresses.

7. If you want to type what you submit to the newsletter, please don't exceed a seven-inch column width and please single space. Doing this may save an editor from having to retype the material. Please don't use script type.

8. Your RCMA membership number and expiration date appear on your newsletter mailing label.

9. You may join or renew your membership for ONLY one year at a time.

10. RCMA accepts paid advertising. For information on advertising rates and mechanical requirements, contact Carol Ruth, RCMA Advertising Manager, P.O. Box 542, Silverado, CA 92676.

RCMA NEWSLETTER

ISSUE 127 SEPTEMBER 1986

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RCMA, Inc., P.O. Box 4563, Anaheim, CA 92803

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CONTACTING RCMA?

Membership applications or renewals, address changes, inquiries about delivery or renewal problems:

Write to: RCMA General Manager
P.O. Box 542
Silverado, CA 92676

Comments or questions about RCMA club policy or newsletter content: Write to: William Mauldin, RCMA General Editor
2268 N. W. 30th Rd.
Boca Raton, FL 33431

Letters for publication in "Your Thoughts" column: Write to: Kurt Swaney, RCMA Assistant Editor
P.O. Box 1198
Manhattan Beach, CA 90266-8198

Correspondence sent to RCMA's Anaheim Post Office Box will still be answered, but there will be a 4-6 week delay.

Cover photo is the Motorola Centracom Console at the new Chicago Fire Department Dispatch Center. It is still not operational.
Submitted by Michael S. Perlman, IL - 044.

The RCMA Newsletter is published by members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, Inc., P.O. Box 4563, Anaheim CA 92803. Subscription rate/membership fee is $16.50 for U.S. residents. For persons in other countries, the following rates apply: Canada and Mexico—$18.50; Europe—$20.00, South Pacific and Asia—$21.50. These dues are payable in U.S. funds and are subject to change. Information contained herein is obtained primarily from members and does not necessarily present the position or reflect the opinion of RCMA as a whole. The RCMA does not necessarily recommend or endorse products or services advertised herein. The publication is copyrighted ©. Reproduction of any material in this newsletter is prohibited without prior written consent.

CALENDAR

Send notices of upcoming events for the Calender section to:
John R. Clark, 2701 Fairview Road, Costa Mesa, CA 92620
Deadline: 1st of the month two months prior to cover date.

R.C.M.A. Greater L. A. Area Chapter

Contact : Eric J. Christensen (CA-LA-045) KA6IHT 224.66 MZz
P.O. Box 3962 Santa Fe Springs, CA 90670-1962

R.C.M.A. West Los Angeles Chapter

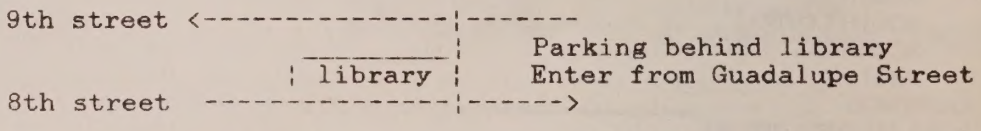
Contact : Hugh Stegman (CA-LA-472)
11622 Exposition Blvd #2, Los Angeles, CA 90064
Talk in: 146.925 MHz {-600 PL-2A} Tues 1930 hrs net.

The new West Los Angeles Chapter of RCMA meets on the 2nd Wednesday of every month, at 7:30 PM, at Shakey's on Sepulveda Blvd. and Playa or Jefferson (depends on which way you're going), in Culver City. This is a few blocks north of Fox Hills Mall, and the 405 freeway exit at Slauson.

Meetings are scheduled for Sept 10, Oct 8, and Nov 12, 1986. Come for frequency swapping and general fun.

Austin Area Radio Listeners Meeting

Meeting every 2nd Tuesday 6:45 PM Austin Public Library 4th floor room B. For more information, contact Richard Quintanilla TX 043 Austin Radio Club, P.O. Box 5053, Austin TX 78763



R.C.M.A. Chicago

Contact Edward Robert Sirovy IL-004 312 969 2856
311 S. Williams Street, Westmont, Il 60559

Meetings: Homer's Resturant and Lounge, 7340 Madison Street, Forest Park is currently the temporary location . This location is about 2 blocks west of Harlem Ave and about 3/4 mile from both the Congress/O'Hare and Lake St lines. It is 4 blocks north of the Eisenhower Expressway and 2 blocks west of the Harlem Ave Exit. (It would be wise to check with Ed Sirovy to be sure this is the location for the following meetings)

Sunday	August	17	1986	Field Exercise (Shoe Factory
Saturday	September	27	1986	12:30 PM Woods)
Saturday	November	15	1986	12:30 PM

Visitors are welcome but please confirm the date in advance.

A SASE on file assures notification of tours and other items which may be scheduled on short notice.

R.C.M.A. for D.C., MD, VA, & DE

Contact: Capitol Hill Monitors % Alan Henney (MD 069)
6912 Prince Georges Ave, Takoma Park, MD 20912

Southern New England Scanners Club

The Southern New England Scanners Club is currently undergoing a reorganization.

R.C.M.A. Minneapolis — St. Paul Area

Contact: Chuck Steier MN-008 (612) 927-9253
4820 Hwy 7, Minneapolis, MN 55416

A SASE on file assures notification of chapter activities (tours, gatherings, etc). Non members are welcome to attend.

All Ohio Scanner Club

Contact : Dave Jones Treasurer or John Thyne Secretary
P.O. Box 148, Vandalia, Ohio 45377

The All Ohio Scanner Club covers the area of Indiana, Kentucky, Michigan, Pennsylvania, West Virginia, and Ontario, Canada. We welcome members from these and other areas who wish to join our club.

Sample Newsletter: $1.00 plus $0.39 stamp. Membership information for a large SASE to the Post Office Box listed above.

To contact David B. Marshall OH-146, Managing Editor and Founder,
50 Villa Road, Springfield, OH 45503-1036

* * * * * *
* SECOND *
* ANNUAL *
* PICNIC *
* * * * * *

The ALL OHIO SCANNER CLUB will host it's second annual summer meeting and picnic on Saturday, August 17, 1986, in Columbus, Ohio. All R.C.M.A. members are invited to attend. For more information, please send a SASE to David B. Marshall OH 146 50 Villa Road, Springfield, OH 45503-1036

R.C.M.A. Wisconsin

Contact Scott W. Miller WI-039
122 Greenbriar Drive, Sun Prairie, WI 53590

NEED BACK ISSUES OF THE RCMA NEWSLETTER:

Lots (Months/Year)	No. of Issues	Price
Sept 75 — June/July 76 (No Oct. or Nov. Published)	7	$2.00
August — Dec. 76 (No Oct. Published)	4	$3.00
Jan. — June 77	6	$4.00
July — Dec. 77	6	$4.00
Jan. — June 78	6	$5.00
July — Dec. 78	6	$5.00
Jan. — June 79	6	$6.00
July — Dec. 79	6	$7.00

1980—to date issues are available at $1.50 per copy

Order Total	Include This Amount of Postage
$ 1.50 — $ 5	$1.20
$ 5.50 — $10	$2.25
$10.50 — $15	#3.30
$15.50 — $25	$4.15
$25.50 — $35	$5.50
Over $35	$7.00

Send your request & check/M.O. (payable to RCMA) to:
RCMA General Manager
P.O. Box 542
Silverado, CA 92676

your thoughts

Kurt Swaney, RCMA Assistant Editor
P.O. Box 1198, Manhattan Beach, CA 90266-8198

Your Thoughts is RMCA's members forum on current topics of interest to the scanner hobbyist. If you have any thoughts you would like to express, RCMA encourages you to send them in.

All letters must include your name, address, and RCMA membership number. Due to space limitations, RCMA reserves the right to condense submitted material.

Dear Your Thoughts:

I received my first subscription newsletter yesterday, and I was quite pleased with it.

Since I am new to this hobby, I would like to suggest a bi-weekly

column in the Newsletter. The column would include tips, suggestions, etc., from people who have been hobbyists of this kind for a while. I think this information would be valuable since the Newsletter seems to cater to the "old pro." When I read the information on RCMA before joining it, I was under the impression that the Newsletter would have something devoted to the amateur. From what I can gather, it does not.

I appreciate you reading these comments, and keep up the good work!

Sincerely,

Allan Koenig, TX-178

[How about it "old pros?" Anybody out there able and willing to edit a monthly, or perhaps bi-monthly, BEGINNERS CORNER column? If so, please contact either Bill Mauldin, RCMA General Editor, or myself. Allan's right, RCMA does have something for everyone, including beginners! KDS]

Dear Your Thoughts:

Immediately after the cellular telephone industry announced that it is too costly and impractical to "scramble" mobile phone calls, they reversed themselves.

They were very clear that scramblers would be extremely costly and a technical nightmare. Yet, less than one month after telling these fairy tales, Bell Atlantic announced that scrambling equipment for their cellular telephones is now available at a moderate cost to the subscribers. (Bell Atlantic serves PA, NJ and DL.)

Sincerely,

John H. Hart, PA-019

[Please see MONITORING AND THE LAW for Bob Horvitz's latest ANARC News Release! KDS]

Remember, YOUR THOUGHTS is for precisely that: YOUR THOUGHTS! Hope we see yours soon!

Kurt

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs send a self-addressed, stamped business size envelope with your request to the address below.

Write to Joe Barr, 1500 Bunbury Dr., Whittier, CA 90601, for the following:
- Copy of ANARC Club List — Sent 25¢ and an SASE (business size)
- Sample Copy of ANARC Newsletter — Send 60¢ and an SASE (business size)
- Annual Subscription to ANARC Newsletter — $7.50 for residents of U.S., Canada, and Mexico; $10 Overseas (Airmail)

AUGUST 22-24 INTERNATIONAL RADIO CLUB OF AMERICA (IRCA) Annual IRCA Convention Palm Beach, Florida. Convention sessions at Hyatt of the Palm Beaches Hotel. Including Banquet, radio station tours, IRCA Auction, ballgame etc. IRCA is a medium-wave radio convention. Registration details for a SASE from IRCA, P.O. Box 482, East Moline, IL 61244

AUGUST 20-SEPT 1 - NATIONAL RADIO CLUB (NRC) Annual N.R.C. Labor Day Weekend Convention. Ramada Inn, New Castle, Delaware. For detains send a SASE to Dave Schmidt, Box 11502, Wilmington, Delware, 19850

SEPT 6 AMERICAN SHORTWAVE LISTENERS CLUB (ASWLC) Saturday, 10 AM to 3PM at club headquarters, 16182 Ballad Lane, Huntington Beach, CA 92649. For information send a SASE to above address or call (714) 846-1685.

OCT 4 AMERICAN SHORTWAVE LISTENERS CLUB (ASWLC) Saturday, 10 AM to 3PM at

club headquarters, 16182 Ballad Lane, Huntington Beach, CA 92649. For information send a SASE to above address or call (714) 846-1685.

DISCOVERIES, published quarterly by World Radio Network, S.A., 332 Corey Ave, St. Petersburg Beach, FL 33706, is sent free to Radio Discovery listeners. To be placed on the mailing list, send a letter, or postcard, to the above address. Radio Discovery - Voice of the Caribbean is broadcasting on shortwave radio from Santo Domingo, Dominican Republic. Rudy Espinal and Jeff White are officers in the station's management.

DX PARTY LINE of Radio Station HCJB, Casilla 691, Quito, Eucador, South America has had to make a change in the Summer Host position. Clayton Howard was to take over for John Beck. However Clayton is now ill, and Glen Volkhardt and Roger Stubbe will fill in. If you wish you may sent a card to Clayton at 20 Westlake Drive, Orange City, FL 32763.

FM ATLAS and STATION DIRECTORY 10th Edition, edited and published by Dr. Bruce F. Elving, is now available. The 164-page format features 77 pages of FM maps showing exact station locations. Full technical and program data on some 5000 FM radio stations of USA, Canada and Mexico are given. The book may be ordered from Dr. Bruce F. Elving, Box 24, Adolph, MN 55701-0024. Cost is $8.95 + .55 for postage. Two or more copies for $7.00 +.55 each. (Editors comment, this is a most interesting publication, and well worth the cost. Very nice to have in your car as you travel. CAOR078)

THE 6800 SWL/DX FRIENDSHIP SOCIETY is for those owning, or interested in SONY makes of receivers, especially the ICF 6800-W. They issue a quarterly news- letter "The Short-Wave-O-Gram". For information write to Douglas Hopkinson, 260 Perkins Boulevard, Southampton, Ontario, Canada, N0H 2L0

WILLIAM J. PLUM, R.D. #8, Glenn Road, Flemington, NJ 08822, features custom printing for DXers. He supplies report cards and QSL cards in English, Spanish French, and Portuguese; #10 Airmail envelopes with red and blue borders; log sheets, personalized SWL pennants and mint stamps of Brazil, Ecuador, Columbia, Peru and Venezuela available for use as return postage. For information send a #10 SASE to above address.

JENSEN TOOLS INC, 7815 South 46th St., Phoenix AZ, 85044-5399. has a 146 page 1986 catalog featuring communications tools, equipment as well as computer testing devices. Write for a free copy today.

From The CAPTAIN'S DESK

William Mauldin, RCMA General Editor
2268 N.W. 30th Rd., Boca Raton, FL 33431

WOULD YOU LIKE TO BE AN RCMA EDITOR?

In the past when an RCMA column editor resigned, we made the announcement in the NEWSLETTER. This old policy caused some columns to go for as long as four months without material. The announcement had to be written, then printed, then mailed out as a part of the next regular issue. Following that delay, there was the delay of waiting for applications, then making the appointment, and finally the new editor had at least a month to get into print. Like many of you, I do not like to see empty columns. We have come up with the answer to this problem at long last!

Effective with this issue, I am asking that all members who are interested in becoming a column editor, send me your name, address and a listing of which columns interest you. This "waiting list" of possible editors will be put on file, and when the column of interest becomes available, you will be notified at once by first class mail. At this time, you will be instructed on how to make immediate application for the opening. We think most,

if not all openings can be filled within three weeks. Hopefully this will keep the columns filled and prevent "no column this month" blanks!

If YOU are interested in being placed on this list, send a card or letter with your name, mailing address and a listing of any or all columns in which you have interest in writing. This listing will go into a computer file, and if any of the columns become available, we will write you when the current editor resigns. At that time, you will be requested to write a letter telling of your interests and thoughts for the column. Listing your personal qualifications will also be required at time of application. Also, since all RCMA columns must be "camera ready copy" when printed, remember that your typewriter or computer word processing equipment is important too. If two members of equal qualifications made application for an opening, the one with the best typewriter or word processing printer would be selected. Keep this in mind when that big day arrives, and YOU receive your announcement of an opening!

For now, if YOU are interested in being listed for any editor openings, send me your name and address along with a list of the columns of interest. The opening announcement will repeat details and instructions on how to make further application! By all means, if you are the least bit interested, get on the list!

EDITORS NEEDED FOR SPACE, LAW AND COMPUTER COLUMNS

Since our computer file has just started, I would like to announce that Larry Van Horn has just notified the staff that he must resign as Editor of Space Communications. If you are interested in this position, please respond at once by sending me a letter indicating your thoughts and interests regarding the position. List all of your personal qualifications which might be helpful in your selection. And, write your letter on the typewriter or word processing printing that you would use to write the column, if selected. Remember, if two equally qualified members make application, the member with the best word processing equipment will be selected.

SPACE COMMUNICATIONS is a monthly column which requires a minimum of two pages of copy each month. The material covered relates to both manned and unmanned systems, orbital data, hobby receiving equipment such as receivers, antennas, and computer data which is helpful in receiving signals from satellites. Radio frequencies which are usually covered in the column relate to up and down links, hidden signals on sub-carriers, users, satellite assignments and channel reception. Frequencies used at launch sites are also covered.

This is one of the most interesting subjects we have, and the information can be some of the most interesting and useful! There are thousands of normally available signals being transmitted, and as Editor of this column, you are encouraged to report it all. There are thousands of hidden signals also, many in voice, FAX or RTTY. Part of our hobby is knowing more about what is up there, and this is one subject which is expanding almost daily. If you are qualified and would like to make application for this outstanding volunteer position, by all means write me today!

As this article is being written, we also have openings for Editor of COMPUTER CORNER and MONITORING AND THE LAW. These are two of our most important columns, and qualified volunteer editors are needed at once!

MONITORING AND THE LAW deals with current and pending legislation and laws which deal with monitoring, radio communications, mobile use of scanners and current news items related to monitoring in general. The volunteer editor of this column will be expected to write at least a page a month related to this general subject.

COMPUTER CORNER is looking for a qualified volunteer editor who can write at least a two page article each month on computers, computer interfaces and programs as they are related to radio communication monitoring. A background in computers and program construction will be helpful if making application for this position. As with all editors, you will be expected to answer reader questions on this general subject.

If you are interested in an appointment for any of these openings, please let me hear from you right away. Your application letter should be typed on the typewriter or word processing printer that you will use for the column, if selected. Give your thoughts and ideas for the column along with your personal qualifications!

HURRICANE MONITORING

The next two months, September and October, are usually the most active for hurricanes.

The emergency communications connected with the reporting of general information, health and welfare, and finally emergencies, can be some of the most interesting on the radio. This season started early, and with Hurricane Bonnie actually crossing the Gulf Coast line in June, the season has promised to be most interesting.

Whenever a tropical storm is within 250 miles of land, the Hurricane Watch Net activates on shortwave (HF). The frequency of operation is always the same for this net, and if you have a shortwave receiver which can receive upper sideband, and 14 MHz, you can receive the Hurricane Watch Net on 14.325.0 MHz. Of course, your actual reception will depend on (1) your location, (2) the quality of your receiver and antenna, and (3) the actual band conditions. But, regardless, you should be able to hear much of the action as the net activates. The Hurricane Watch Net always stays on the air until the storm is downgraded and all possible emergencies have passed. You can count on it being there.

The frequency, 14.325.0 MHz, that the Net uses is in the "20 Meter" amateur band. This band is usually best in the daytime, however, depending on sunspots and magnetic storms, the band can be open all night, or almost completely dead. With the sunspot cycle at or near the low point, band conditions have not been all that outstanding, however, listening has been pretty good during much of the summer. The band performs better in the summer months than in winter, however, fall can bring some dead to super listening conditions. Either way, the Net will be there, passing information about the storm, expected or current conditions, and information about other networks which will be taking health and welfare traffic.

Jerry Murphy, K8YUW, who is the Net Manager usually takes his position in the National Weather Service office in Cleveland, and can be heard giving bulletins and updates. Jerry is not usually the "net control" station, as this assignment shifts with band conditions. If your antenna is good enough, or if your location is just right, it is not unusual to hear mobile ham units reporting from the storm areas. It makes for some very exciting and very interesting listening.

While the Hurricane Watch Net takes place on 14.325.0 MHz, there are also other networks active on other bands. The lower frequencies don't have quite the "skip" of the 20 meter band, however, check for nets on 40 meters (7 MHz) around 7.235 MHz, plus or minus a little. Once the sun sets, 75 meter nets become active. Local traffic can be heard for a couple of thousand miles on frequencies between 3.900 MHz and 3.975 MHz. Again, the reception depends on your location, your equipment and band conditions.

The next few weeks can be the most active part of the 1986 Hurricane Season, and you will be missing some of the most exciting listening available if you don't tune in to the amateur radio operators who are often the only link with the outside world for a few very exciting hours or even days, during especially bad storm conditions!

NEW PUBLICATIONS THIS MONTH

Bob Coburn, NH-03, sends us a copy of the new NEW HAMPSHIRE scanner guide for review this month. The 191 page, full size directory covers aircraft, local government, ambulance and rescue, news media, mobile and cordless telephones, hospitals, forestry, power utility, amateur radio, business services, general mobile data, ski patrols, 800 MHz trunked business, marine, railroads, radio common carrier, highway, and fire and police.

The book lists frequencies by city area, and everything is broken down so that you can see just about everything on the band by just looking up the city area of interest. This makes up the first half of the directory. The back half of the book is a complete listing by frequency. There is also a complete section on the new 800 MHz system of the State Police, details on the "County Radio System", used by state and county police for an inter state system. Complete radio codes used by most New Hampshire police and fire are listed also.

We found the NEW HAMPSHIRE SCANNER GUIDE to be an excellent general listening publication. The ski patrol information would be very handy if you visit the winter resorts and like keeping up on what the conditions are, who is hurt and what is going on as you sit by the fire keeping warm. The book sells for $17.00, postage paid. You can get more information by contacting the Official New Hampshire Scanner Guide, Post Office Box 712, Londonderry, NH 03053.

RCMA PUBLICATION REVIEWS AND ADVERTISING

RCMA welcomes the opportunity to review publications related to our hobby of radio

communications monitoring, and we appreciate publishers mentioning RCMA in their books as a club devoted to the hobby. We encourage our members to support those publications and publishers that mention and support RCMA. Publishers are encouraged to advertise with us. Complete information on our low ad rates can be obtained from Carol Ruth, RCMA Business Manager. Advertising with RCMA is reasonable, and you reach those who are serious about the hobby of radio monitoring!

NATIONWIDE COMMUNICATIONS IN EMERGENCIES

The FCC is presently working on a potential overhaul of the nation's emergency preparedness plans in radio and telecommunications! Following the reaffirmation of the FCC's role in restoring communications in a national or regional emergency, FCC staff members are quietly laying groundwork for a system in which private radio operators can act as a backup communications if a major disaster were to knock out land lines and common carrier service. The project is in the early stages of study at present, but you can expect to see more on this in the near future!

A SPECIAL THANK YOU TO ANARC

Bob Horvitz, ANARC Government Affairs Liaison, worked many hard and difficult hours on the recent Electronic Communications Privacy Act. Many of you understand why RCMA and ANARC, the Association of North American Radio Clubs, are closely related, however, even with this understanding it is hard to appreciate the effort of ANARC and especially Bob Horvitz during the recent legislative effort.

I would like to thank Bob and ANARC for all they did for us, for the hobby, for the freedom of listening. Without Bob's long hours of work, without his testimony, and without ANARC, you would have lost much more of your listening rights than you can imagine. RCMA appreciates you ANARC, and especially you, Bob!

We would also like to thank MONITORING TIMES and Bob Grove for the time, space and effort that MT devoted to the Privacy Act. And, last but not least, our special appreciation to our own Assistant Editor, Kurt Swaney! Many, many thanks from all of us to each of you!

NEWS AND ITEMS OF INTEREST

ICOM OF AMERICA announces a new antenna that will certainly catch your eye! The new Icom AH-7000 Super Wideband Omni-directional Antenna is out and quite worth looking into. I am sure Jim Abdu of NEW PRODUCT REVIEW will have a report on the item soon, but briefly let me tell you about this super performing item. The AH-7000 antenna is being marketed by Icom to go with the Icom IC-R7000 wide range receiver, but it will work with any scanner and increase your performance greatly. The antenna is matched to work with any frequency between 25 MHz and 1300 MHz. The match is so good that hams will soon be using the antenna for transmitting on the 50 MHz, 144 MHz, 440 MHz, 900 MHz and 1200 MHz bands! The antenna is not small, but the performance is excellent. The price range is just under a $100 from discount dealers. If you scan wide frequency ranges and want a high performance omni directional antenna, this is it.

For those of you interested in becoming amateur radio operators, GORDON WEST RADIO SCHOOL of 2414 College Drive, Costa Mesa, CA 92626 has announced a new, complete line of code tapes and study manuals... all offered with a 100% satisfaction guarantee. When I upgraded my amateur radio license some years back, I used Gordon's material and found the study materials to be outstanding, easy to use, and fun. If you are at all interested in becoming an amateur radio operator, write Gordon (an RCMA member) for details. The FCC has a docket pending which will give novice hams voice privileges on certain bands, and the fun is just around the corner! Becoming a ham is not hard, and you can do it if you want to devote a little time and effort to the hobby!

The OHIO STATE HIGHWAY PATROL has just started a program whereby cellular mobile telephone users can dial a toll-free hotline to report highway incidents and accidents. The calls will be relayed by the answering operator to the appropriate patrol post or agency for response. The initial service will be available for the Columbus-Dayton-Cincinnati triangle, but other areas will soon be added. The OSHP is paying the administrative costs and service charges. The program was developed by the International Association of Chiefs of Police. Ohio is the seventh state with the system in operation.

Please continue to support the RCMA volunteer editors who need your continued input for column information and material! Everything you read in this edition is a direct result of a member submitted monitoring effort! You are our field reporters!

RCMA BUSINESS REPORT

RCMA 2ND QUARTER FINANCIAL REPORT - 1986

	APRIL	MAY	JUNE	2ND QUARTER
Mail Prep & Computer Updating	340.86	367.03	337.91	1,045.80
Newsletter Production & Printing	3,129.73	2,017.64	1,963.56	7,110.93
Postage:				
Bulk (3rd Class)	225.00	225.00	235.00	685.00
1st class	186.72	198.15	178.71	563.58
Encumbrance carried f'wd			71.29	71.29
Back Issue Storage	46.00	46.00	46.00	138.00
Office Supplies	17.38	73.77		91.15
ANARC Annual Dues	82.00			82.00
ANARC contribution*	250.00			250.00
Returned Check/ Bank Charges		74.81		74.81
Subscription fees	16.00			16.00
Total Expenses	$4,293.69	$3,002.40	$2,832.47	$10,128.56
Balance on 3/31/86: $8,373.74				
Deposits	$2,324.80	$2,991.50	$4,234.15	$ 9,550.45
Balance	$6,404.85	$6,393.95	$7,795.63	$ 7,795.63

*to help defray expenses incurred in Senate Subcommittee (H.R. 3378) testimony

AIRCRAFT

Send private, commerical, firefighting and law enforcement aircraft frequencies of interest in the 108-136 MHz range and frequencies in other bands above 30 MHz associated with airports and aircraft plus questions, articles and tips related to aircraft monitoring to:

Darrel Charest, 1913F Oak Creek Lane, Bedford, TX 76022

After months of promising the article on ARINC Communications Addressing and Reporting System (ACARS) we have it for you this month. Fortunately our contributor, Bill Tobin, NM-015, had the article stored in his computer and he was able to retrieve it when it was lost in transit to another Editor. As most of you know, Bill has been a regular contributor to the Aviation Column during the past year.

Before we get to ACARS and frequencies, we need to acknowledge some of the letters we received during the past month.

Tom Heiderer, WI-006, and Walter Detwiler from Park Ridge, N.J. wrote for information on ARINC channels in their areas.

Paul L. NJ072, who provided us with the superb listing in the Minneapolis area, wrote to express his concern for copyright violations if frequency lists are extracted from other publications. We also share Paul's concern and hope our membership will submit frequencies that have been confirmed. Frequencies from U.S. Government publications may be used without regard to copyright laws.

John P Johnson, WI-084, wrote to say he was a new member of RCMA and enjoyed listening to the aircraft band. In his letter John asked questions on frequencies in his area as well as one on weather information. "What is a convective SIGMET?" In our answer we stated that Convective SIGMET is a contraction for the term " Significant Meteorological Information" and is to be issued over a wide area. Convective refers to storms of vertical development or thunderstorms. Frequently the broadcast of this information on the air traffic control frequencies will specify the upper limit of the storm, i.e. "Tops above Flight Level 450" the size of hail stones that might be expected and potential wind gusts. Thunderstorms such as these pose a serious threat to any aircraft that might penetrate them, and are to be avoided by all means.

Major Willard D Hardman, DC-011, sent a most informative letter on aircraft operations in the Washington, D.C. area. Willard reminded me that Dulles is one of the most rapidly developing airports in the U.S. And when I realized this was true, it came as something of a shock because when I think of growth, Dallas/Ft Worth and Atlanta are the two airports that immediately come to mind. Yet Dulles was among the last major airports constructed in this country and for years had little success in luring carriers from Washington National. As Willard pointed out, Dulles has now come of age. Next month we will share more of this information with you as well as the frequency data included in his splendid letter.

Robert A Coburn, author of the Official New Hampshire Scanner Guide sent a copy of his publication and authorization to use aircraft frequencies shown in the book. Scanner buffs in his area will find a wealth of information in the Guide. Bob has also listed the UHF aircraft frequencies for the area - a feature of great interest to me.

AIRLINE VHF DIGITAL COMMUNICATIONS VIA ACARS by William Tobin NM-015

Discovery of System

One day while tuning the aircraft VHF band, I came across what sounded like a data transmission on 131.55mhz. Then at times while monitoring ARINC (Aeronautical Radio, Inc.) airline voice communications on 131.3mhz the pilots and dispatchers would discuss messages sent via a system called ACARS (ARINC Communications Addressing and Reporting System). Could the data I heard on 131.55mhz be this ACARS system? After all, since about 1980, most of the airline position reports and weather reports communicated on 131.3mhz ceased. A digital communications system to handle such routine reports could be the answer to the reduction of voice on 131.3mhz.

So off the the library I went, and discovered that the data heard on 131.55mhz is indeed ACARS. It turns out that 131.55mhz is a nationwide frequency dedicated to ACARS.

Search for Technical Information

Could I somehow get this data to print on my data terminal, or on the CRT of my computer (Radio Shack TRS-80 rp)? I sure did miss all of the positions reports heard on voice, especially since the pilot weather reports were interesting for analyzing upper air weather patterns and changes in the weather patterns.

I searched the library from top to bottom and could not find any more information. I polled some of our RCMA members to no avail. I even built a simple FSK modem and tried all combinations of data rates and word lengths on my data terminal, but could only get garbage to print.

On a business trip to Des Moines, Iowa, I searched the University of Iowa library and came upon a type of data modulation called MSK (Minimum Shift Keying) at 2400 bits per second which was used for VHF data link tests between aircraft and ground stations. I had never heard of MSK

before, and found this very interesting. I also found some general information on the purpose of ACARS and an address for the engineering branch of ARINC.

Finally, I wrote to ARINC to request what the data rate and type of modulation of ACARS were. I really did not expect any response, but was very surprised when a 100 page technical specification for aircraft ACARS came in the mail.

The Purpose of ACARS

We know that the computer is used extensively by the airlines for their operations, and ACARS is actually a link between the airplane and the computer system. Data such as fuel boarded, number of passengers on board, aircraft weights, trim and flap settings, weather data, and flight planning are uplinked from the dispatcher to the aircraft. Data such as on and off times, position reports, telemetered engine and sensor data, and inflight weather conditions are downlinked from the aircraft to the airline computer. In many cases, the transmission of downlinked data is automatic. For example, when the cabin door is closed, a switch closes and causes an out message to be downlinked. On takeoff, when the wheels go up, another switch closes and causes an off report to be downlinked. This ACARS system saves the flight crew the tedious task of transmitting all of these messages by voice. Uplinked messages often print on a printer, so that a hard-copy is immediately available to the flight crew.

Figure 1 shows the types of message handled by ACARS.

Figure 2 shows some actual messages handled by ACARS.

Technical Information - MSK and Protocol

The audio carrier is 2400 Hertz, and the data rate is 2400 bits per second. As bits are transmitted, a carrier of 2400hz indicates no change in state of the bits, from 1 to 0 or from 0 to 1. However, a carrier of 1200hz indicates a change in state of the bits.

Figure 3 displays MSK modulation.

The protocol is a form of packet radio. When a aircraft is ready to transmit a message, it monitors the radio channel for a busy signal. If there is no traffic on the channel, the aircraft transmits the message. If the ground station receives the message without any errors, it transmits an acknowledgement to the aircraft. If the ground station detects an error, it does not send an acknowledgement, and the aircraft will retransmit the message after a delay. The protocol uses bit check sequences for error detection.

Technical Information - Hardware for Receiving ACARS

My Regency Digital Flight Scan aircraft scanner is tuned to 131.55mhz. The ACARS waveform from the aduio output jack of the radio is preserved. I tried the audio from a Sony Air-8 and from a Realistic Pro 2020, but distortion is terrible. It is interesting that the signal sounds clear to the ear on the Sony and Realistic radios, and sounds like static on the Regency radio, but that the terrible sounding signal is not distorted. Time and again, when working with digital signals, I find that the nicest sounding ones are highly distorted, and that the terrible sounding ones are not. Apparently most of the sidebands, which sound bad to the ear must be present with the carrier to preserve the data. The Sony and Realistic scanners apparently have some type of audio filtering which causes the sidebands to be dropped.

The audio from the scanner is fed into a waveshaper which changes the sine wave into a square wave for the computer input. This waveshaper is home built, with the parts taken from the FSK modem which would not work with ACARS.

The square wave is now fed into pin 3 of the RS232 port on the Model 4P computer. When the RS232 port is sampled by the computer, the computer sees a hex number of DE when the voltage at pin 3 is zero, and it sees a hex number of DF when the voltage a pin 3 is +5V.

Technical Information - Software

The Z-80 assembly language program is divided into several tasks.

The beginning of the program is a filter which will allow the rest of the program to execute only when a 2400hz carrier is received. I found that this filter was needed because the noise of the squelch breaking before the 2400hz tone actually came on would cause the program to start too soon, and then not be in sync with the data. This problem still occassionally happens, even with the filter, but the problem is not as bad. Of prime importance is a good antenna system so as to get nearly full quieting on the scanner when the RF carrier comes on.

The next portion of the program measures the length of the ØV and +5V pulses at pin 3 of the RS232 port, and loads these lengths into memory.

Next each length is compared with the length of the previous pulse, and bits are loaded into memory, one bit for each pulse. If a long pulse occurs, indicating a carrier of 1200hz, the state of the bits is changed. Bits are loaded until all of the pulses in memory have been analyzed. The string of loaded bits now represent the ASCII characters.

Finally, the bits are processed further to prevent ASCII control functions from making the CRT change to inverse video, blinking video, and such things. Only printable characters are left untouched in memory; all other characters are changed to space. A linefeed and carriage return are then stuck on the end, and the whole string of characters is then displayed. The program now goes back to the start to wait for another ACARS signal.

More Information is Available

My listing of the assembly language program is full of comments.
The program will only work on Z-80 microprocessors.
Contact me if you wish to have a copy of this program, or if you want a schematic of the sine to square wave converter, or a listing of formats and codes used on ACARS.

Well that is the ACARS system. Decoding it took lots of work, but it was fund, and now once again I am able to analyze the upper weather patterns.

References

ARINC COMMUNICATIONS ADDRESSING AND REPORTING SYSTEM
ARINC Characteristic 597-3 Published October 31, 1983 by
Aero nautical Radio Incorporated

"ARINC Communications Addressing and Reporting System (ACARS) -
The Data Link That Got Implemented and Why"
Radio Technical Commission for Aeronautics 1977 annual assembly meeting

MESSAGE TYPES

_J	NO INFO TO TRANSMIT, POLLED MODE
_	GENERAL RESPONSE, DEMAND MODE; NO INFO TO TRANSMIT
00	EMERGENCY SITUATION REPORT
51	AIRCRAFT GMT TIME REQUEST; TIME DELIVERY FROM GROUND
54	AIRCRAFT VOICE CONTACT REQUEST
5D	ATIS REQUEST
5P	AIRCRAFT LEAVING THE ACARS NET FREQUENCY - SUSPENSION OF SERVICE
5R	POSITION REPORT
5U	WEATHER REQUEST
5Y	REVISION TO PREVIOUS ETA, OR DIVERSION
5Z	AIRLINE DESIGNATED DOWNLINK
7A	ENGINE DATA/TAKEOFF THRUST REPORT
7B	AIRCRAFT MISC MESSAGE
C1	UPLINK MESSAGE TO THE PRINTER

```
C9-CF PRINTER STATUS: A=ERROR B=BUSY C=LOCAL D=NO PAPER E=BUFFER OVERRUN
      F=RESERVED
F3    DEDICATED TRANSCEIVER ADVISORY
H1    MESSAGE TO/FROM AIRCRAFT TERMINAL

Q0    LINK TEST
Q1    DEPARTURE/ARRIVAL REPORTS
Q2    ETA REPORTS
Q3    CLOCK UPDATE ADVISORY
Q5    PRINTER NOT ACCEPTING UPLINKED MESSAGE
Q6    AIRCRAFT JOINING THE ACARS NET FREQUENCY 131.55MHZ
Q7    DELAY MESSAGE
QA    OUT/FUEL REPORT
QB    OFF REPORT
QC    ON REPORT
QD    IN/FUEL REPORT
QE    OUT/FUEL/DESTINATION REPORT
QF    OFF/DESTINATION REPORT
QG    OUT/RETURN IN REPORT
QH    OUT REPORT
RA    COMMAND THE AIRCRAFT TERMINAL TO TRANSMIT DATA
RB    RESPONSE OF AIRCRAFT TERMINAL TO THE RA MESSAGE

:;    COMMAND THE AIRCRAFT TRANSCEIVER TO CHANGE TO THE LISTED FREQUENCY
```

FIGURE 1

Here are a few actual messages:

```
(#   2.N602TW 5U !426TW0890ABQ
```

This is a 5U weather request message. TWA 0890 is requesting the weather for ABQ, Albuquerque, NM.

```
(#   2.N602TW _ A
```

The ground station has acknowledged the message from TWA 0890 (N602TW).

```
(#   2.N602TW C1C .MKCDITW 261816  AGM  AN N602TW/GL ABQ  -  #  ABQ SA 261800
SA 1749 70 SCT 120 SCT 250 -OVC 60 157/65/41/2706/020/ 002 1177 47  )
END OF REPORT
```

This is a C1 type of message - the ABQ weather was sent to the printer in the aircraft. Perhaps in a future article I will write about decoding weather reports, for those who would like to learn this.

```
(#   2.N602TW _ 1715TW0890
```

TWA 0890 has acknowledged the report.

A message of telemetered engine data from an American Airlines flight:

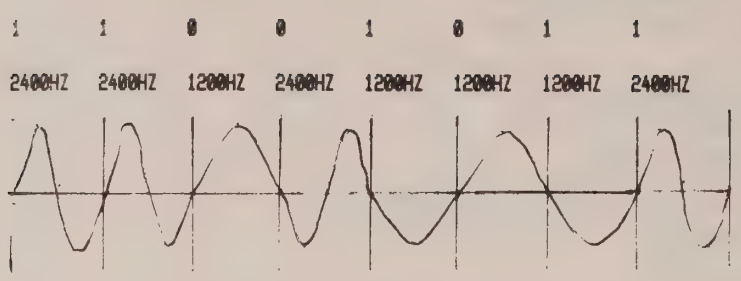
```
(#   2.N306AA H1 D141AA0000#DFBEDA/E1501,3A7,318,DFD,,611612,5EC5F0,53E525,
22D235,036039,2BF020,126000,19F0DE,10401040,2F9,0DA0D8
```

One more message, this time uplinked to N356AU from his dispatcher, indicating no inbound delays to Los Angeles (LAX):

```
(#   2.N356AU C1A .FFXFFAL 261854 AGM  AN  N356AU/GL ABQ  -
FYI...NEGATIVE INBND DLAYS LAX  SCC ALLISON
```

FIGURE 2

Bit stream:



Notice that when the carrier stays at 2400HZ, the state of the bit stream does not change. If the carrier were to stay at 1200HZ, the bits would continuously alternate between 1 and 0.

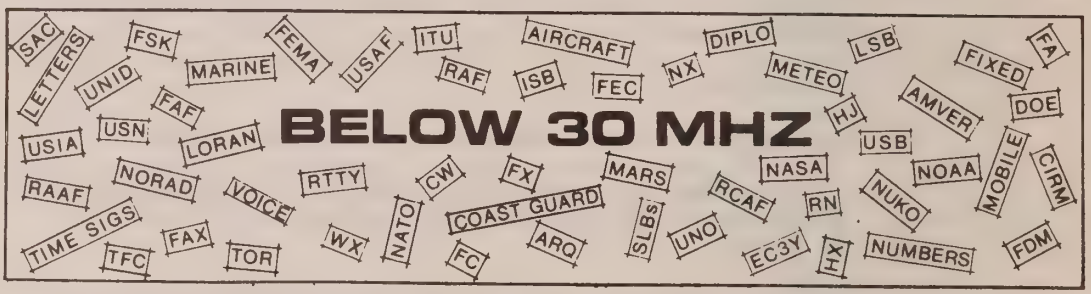
FIGURE 3

AMATEUR RADIO COMMUNICATIONS

This column is for reporting on amateur radio activities that may be of interest to scanner listeners. Send reports and questions concerning repeater nets, civil emergency systems, packet ratio, amateur TV, etc., to:

Terry Stader, MI-062, 8 Christopher Road, Westford, MA 01886

NO COLUMN THIS MONTH



This column is for HF AM, CW, SSB, RTTY and FAX reception reports, note, articles, and questions related to HF utilities. Services covered in this column include aeronautical, coastal/marine, weather, government, military and 'spy' stations — essentially everything except broadcasting, CB and amateur radio.

Send reports to: Geoff Halligey, 85 Southwood Road, Cottingham, England, HU16 5AJ.

THE SPY

My trafficless friend still keeps going at 0745 UTC daily on 11510 kHz; today he used FVR as a call, yesterday ARQ and the day before that SXK. The band from 9 to 14.5 MHz has been repeatedly searched, in sections, for a reply, but no luck so far. He transmits for only a few seconds every day.

Neither events in Libya, Chernobyl or Beirut have disturbed his appearance, or given rise to a message, at the stated time.

BOOK REVIEW

RTTY HANDBOOK (3rd Edition) is published by Poly-Verlag in Switzerland. The book covers 10kHz to 30 Mhz and is divided into eight sections:

I List of Stations in Frequency Order
II List of Stations in Alphabetical Order, with freqs.
III Alphabetical List of Callsigns, with freqs and station titles

IV List of Press Agencies, with freqs.
V List of Meteo Stations, with freqs.
VI List of ARQ-FEC/TOR stations
VII List of Marine Coast Stations
VIII Q-Code (in German only)
(QSL= Ich gebe Ihnen Emfangsbestätigung)
Z-code (in German only)
Miscellaneous abbreviations (in German only)
ITU country abbreviations and International Callsign (all in German)

That looks pretty comprehensive, especially if you speak German fluently: however, on one random page of the RTTY HANDBOOK covering 12130 to 12272 kHz there are 46 entries. Ferrell's CFL6 has 118 RTTY entries over this frequency range and while many of CFL's entries may not be active, there are several well known active stations that appear in CFL6, but are omitted from the Swiss book.

The method adopted by the author of listing the RTTY transmission mode is of interest. Since, he says, the standard Baudot code as per CCITT No. 2 is 50 bauds (66 wpm), only baud rates that differ from 50 are given. Also, no information is given at all on frequency shift (the frequency offset between 'mark' and 'space'), since, to quote,'modern RTTY decoders translate any shift automatically' and the user therefore need not be aware of the shift. As a result of these omissions there are a lot of blank spaces in the 'Mode' column.

The price of the book is around 31 dollars, depending on the exchange rate: their brochure does not list a U.S. agency, but, for the price of 3 IRCs, further information can be obtained from:

Poly-Verlag, Spranglenstrasse 30, CH-8303, Bassersdorf, Switzerland.

The same firm also manufacture the POCOM range of RTTY decoders. At the bottom is the AFR-1000, which, says their literature, decodes Baudot in CCITT Nos. 1 and 2 modes and provides fully automatic decoding of CW, ARQ, FEC-SEL and FEC-COL, with FEC decoding of the commercial secret services.

Easy tuning is provided by a 12-LED indicator (tune to the centre LED) and, due to the automatic features mentioned above, there is a notable absence of knobs or buttons. Basic price is SwF 895.00.

There is also a POCOM AFR-2000, AFR-2010 and, at the top end, the AFR-8000. All have the same automatic performance of the AFR-1000, but with the aid of additional modules (purchased separately) can cater for an ever greater range of the more sophisticated RTTY transmission formats.

The AFR-8000 has, in addition, a built-in LCD output display in the form of a narrow screen that displays 2 x 40 characters. The makers claim that any future changes in code will be catered for by additional plug-in boards. Basic price SwF 1890.00.

CROUGHTON, ENGLAND

Most frequency lists include Croughton, which is officially entitled the 'European Communications Centre'. Operated by the US, it lies near the USAF Upper Heyford Air Base, not far from Northampton, in England.

Croughton is adjacent to a busy main road, and sports a very fine assortment of aerials, some of which, not seen before, resemble nothing so much as a housewife's 'whirligig' clothes drier, though somewhat more lofty.

LETTERS AND NUMBERS

6235.0	USB	...	Numbers GG/YL 3-2 format	0925
6745.0	USB	CIO?	PAB calls	1645
11176.0	USB	...	PAB YL, but not 'Novembeer'. Has American accent	1109
11450.0	USB	...	Numbers EE/YL, 4FG format	1445
18195.0	USB	...	Numbers GG/YL, 5FG format	1615

CHANNEL MARKERS

8648.0	CW	OOO	unknown, QSA5	2225
11176.0	CW	CCC		0800 -1730
		SSS	(see June, '86 issue). These have moved	
		PPP	from 11296 to this new freq., accompanied by their 4-character net of stations.	

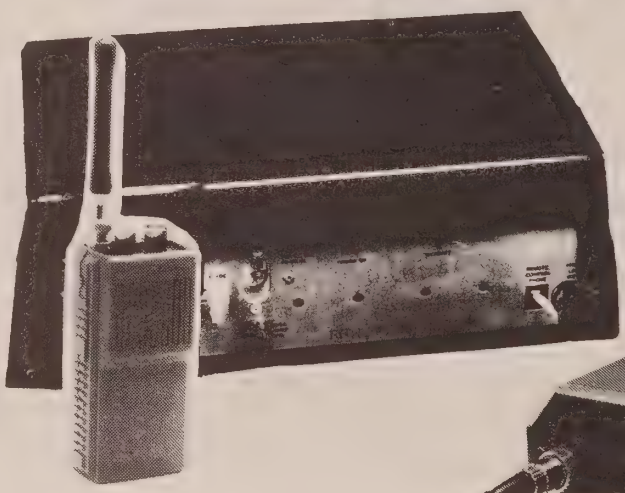
THIS MONTH'S LOG

6973.0	CW	RMP	Moscow	1406
8745.2	CW	5AB	Benghazi Radio (listed as 8450), working ships) (Libya)	1300
10844.0	CW	...	unid Cyrillic, 4-character c/s, changes daily	08-1700
11132.0	CW	RMP	Moscow, clg RMCJ	1525
11156.0	CW	RIW	Khiva Naval, clg RMMS	1500
11237.5	USB		'Interflug Berlin', with a/c comms and wx (GDR)	1120
11553.0	Piccolo	...	Unid	1656
13375.0	USB	...	Berlin, GDR Telcom, 'test transmission'	1407
13977.5	USB		'Moscow Radiotelephone Service'	0800
16363.0	CW		KKN50 Washington, DC, 'QSX...'	1330
19678.0	USB		'Moscow Radiotelephone Service'	1400

That's all for this month. Good hunting !

Geoff

F.M. TWO-WAY RADIO



TOTAL COMMUNICATIONS

5 Watt VHF hand helds from $250, UHF from $300.
30 Watt Mobiles from $400.
Repeaters from $1300.
Antennas and Accessories.
VISA/Mastercard Accepted.

OUR 14TH YEAR!

COMMUNICATIONS CENTER

915 N. EUCLID, ANAHEIM, CA. 92801 (714) 635-1033

BUSINESS, ETC.

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufacturers, news media (behind-the-scenes radio, TV & newspaper), motion picture industry, security (private patrol, detective agencies, campus security & police, amusement park & stadium security, shopping center & mall security, plant/business/hotel security, etc.) General Mobile Radio Service (GMRS), mobile phone/RCC & paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private & municipal water, power, electric, gas, telephone, etc.), and all school & college related frequencies. Send information and questions pertaining to the radio services covered in this column to:

Send Business monitoring information East of the Mississippi to:
Brandt Niemuth, P.O. Box 541, Rosemont, IL 60016

Welcome to another "Hot" column (tail end of summer by the time you read this - I hope). On to business - as they say. Two contributors for this column are as follows:

From Scott Glicker (FL-033) comes the following for the Plantation, Florida area:

461.825	Best Security	Hollywodd, Florida
157.5	Driscoll's Towing Svc	Pompano Beach, Florida

Scott notes that Driscoll's is on a rotation list for various Police Departments in northern Broward County, Florida. Does anyone have a complete list?

From Carl (WI-54) and Randy (WI-59) comes a list covering the "Wisconsin Natural Gas Co" and another covering "Mid 1985 Domestic Land Mobile Radio Service New & Mod License Grants" (various locations and users).

Thank you, gentlemen, for your efforts.

WISCONSIN NATURAL GAS COMPANY

CH	OUTPUT	INPUT	CALLSIGN	REPEATER SITE	DISPATCH OFFICE	UNITS
F1	153.515	158.190	WNAH527	Union Grove	Racine	100's
F2	153.575	158.265	WNAH531	Union Grove	Oak Creek	200's
F3	153.725	158.160	WNAH535	Pleasant Prairie	Kenosha	300's
F4	153.545	158.130	WNAH523	Appleton	"Dispatch"	400's
F5	153.575	158.265	WNAH522	Whitewater	Fort Atkinson	500's
F6	153.725	158.205	WNAH518	Richwood	Watertown	600's
F7	153.545	158.130	WNAH514	Delafield	Waukesha	700's

Company Codes

R4 OK
R7 Out of Service
R8 In Service
R30 Clear
R42 (type of service call)
R99 No calls for you
R100 Any calls for me?

35.20 KNKD345 High Tech Communications, 9710 Circle Dr, Austin, TX
35.38 KNKC339 Interpage Inc, Mt Diablo, San Mateo, CA
43.20 KNKB266 Cook Telecom Inc, King Mtn 3 mi N, Bellingham, WA
43.20 KNKG619 Omni Communications, 56 Shepard Hill Rd, Sturbridge, MA
43.20 KNKG619 Omni Comm, Long Island Expressway & Blydenburgh Rd, Hauppauge, NY
43.34 KNKB583 Crystal Clear Paging, Loop 1604 & Hwy 90 W, San Antonio, TX
43.56 KCI295 Comex Inc, Pack Monadnack Mountain, Peterborough, NH
43.56 KCI295 Comex Inc, Long Hill, 2 mi E of Stratham, NH
43.56 KCI295 Comex Inc, WEKW TV tower Derry Hill Walpole & Mt Rowe, Gilford, NH
43.56 WRV972 Comex Inc, Crafts, Lebanon, NH(?)
43.56 WRV972 Comex Inc, Green Mountain, Claremont, NH
43.58 KNKB337 Mobilfone Service Inc, Chickasha, OK
72.04 KLF644 Gencom Inc, San Miguel Mt, 10 mi E of San Diego, CA
72.28 new South Florida Express Comm, 2 S Biscayne Blvd, Princeton, FL

72.32	KLF644	Gencom Inc, San Miguel Mt, 10 mi E of San Diego, CA
72.38	KUS271	Metronet Inc, Highfield Depot Ave, Falmouth, MA
72.42	KWB402	Communications Center, Lesourdsville-Westcher Rd, Westchester, OH
72.46	KMA262	Gencom Inc, San Miguel Mt, San Diego, CA
72.92	KMA262	Gencom Inc, San Miguel Mt, San Diego, CA
75.56	KPD895	Mass.-Conn. Mobile Telephone, summit of Fort Mountain, Epson, NH
75.64	new	South Florida Express Comm, 5600 N Dixie Hwy, West Palm Beach, FL
75.82	new	South Florida Express Comm, 780 NW Le Jeane, Miami, FL
75.90	KKB530	MCI Airsignal Inc, 611 Ryan Plaza, Arlington, TX
75.92	KLB716	Mobile Phone of Texas, 10 mi S of Abilene, TX
152.240	KWU515	Able Communications, 3 mi NNE of Kingstree, SC
152.600	KKN285	Southwestern Bell Telephone, 2.5 mi NE of Umbarger, TX
158.700	KLB716	Mobile Phone of Texas, 105 Weatherbee, Stamford, TX
158.700	KPE254	Antietam Answering Service, Fairview Mountain, Hagertown, MI
158.700	KRS636	Cybertel Missouri Corp, Henke Rd N of Orf Rd, Dardenne, MO
454.025	KUS271	Metronet Inc, 15 Locust Rd, Orleans, MA
454.025	KQK771	Ram Communications of Michigan, 8375 E Holly Rd, Holly, MI
454.025	KQK771	Ram Communications of MI, Blooes Harbor, Monroe, MI
454.025	KQK771	Ram Communication of MI, Pontiac State Bank Building, Pontiac, MI
454.025	KQK771	Ram Communications of MI, 17117 W Nine Mile Rd, Southfield, MI
454.025	KSD327	Ram Comm of Indiana, WAX-FM tower, 4927 St Rd 9 N, Anderson, IN
454.025	KSD327	Ram Comm of IN, PBS TV tower, Hillegas & Butler Rd, Fort Wayne, IN
454.025	KSD327	Ram Communications of IN, WWKI FM tower, Lafayette, IN
454.025	KWU474	Ram Communications of Ohio, Kent State University, Kent, OH
454.200	KKX714	Mobilfone Communications, 5 mi W of Hwy 35, SW of Buda, TX
454.225	KTS202	Cybertel Illinois Corp, 1296 Yeakel St, Alton, IL
454.300	KIY532	Anniston Communication Svc, Ayers Dr & Ridgeview Rd, Anniston, AL
454.525	KWT994	Bexar Communications, Boerne Stage Rd, 2.8 mi SW of Boerne, TX
454.525	KWT994	Bexar Communications, 202 Holland St, San Antonio, TX
931.1625	new	South Florida Express Comm, 3.7 mi W of Miami, Princeton, FL
931.1625	new	South Florida Express Comm, 2 S Biscayne Blvd,, Miami, FL
931.1625	new	South Florida Express Comm, 2100 S Ocean Lane, Fort Lauderdale, FL
931.1625	new	South Florida Express Comm, 501 E Camino Real, Boca Raton, FL
931.1625	new	South Florida Express Comm, 5600 N Dixie Hwy, West Palm Beach, FL
931.1625	new	South Florida Express Comm, WTVX tower, Stuart, FL
931.1625	new	South Florida Express Comm, 7 mi N of Fort Pierce, FL
93-.---	KNKE202	Southern Bell Telephone, 317 E Davis St, Burlington, NC
93-.---	new	South Central Bell, 315 Division St, Lake Charles, LA

Send Business monitoring information West of the Mississippi to:
Cliff Polkinghorn, 14310 Acacia St., San Leandro, CA 94579

WELCOME TO SEPTEMBER 1986. THIS MONTH WE HAVE A CONTRIBUTION FROM "RICK CA LA 544" THANKS RICK!

AMERICAN CONCRETE CUTTING INC.	507.6125	KV7472	GLENDALE
AMERICAN ROOTER	462.675	KAB1336	OXNARD
	467.675	KAB1336	OXNARD
ANHEUSER BUSCH INC.	153.140	KRH770	VAN NUYS
	158.415	KRH770	VAN NUYS
ARA SERVICES INC.	808.1625	KNFW205	L.A.
	853.1625	KNFW205	L.A.
ARMOUR FOOD CO.	467.425	WAP916	L.A.
ASSOCIATED CHARTER BUS CO.	159.780	KLS686	L.A.
AZUSA LAND RECLAMATION INC.	462.725	KAC7288	AZUSA
BKK CORP.	452.000	KIA347	TORRANCE CORONA MONTROSE
	457.000	KIA347	TORRANCE CORONA MONTROSE
BRAKE DELIVERY SERVICE	159.900	KV2142	L.A.
BUILDERS EMPORIUM	462.675	KAD6315	IRVINE
	467.675	KAD6315	IRVINE
CANNON BUSINESS MACHINES INC.	153.155	KA83724	COSTAMESA
CIF MESSENGER INC.	462.575	KAD3696	TORRANCE
	467.575	KAD3696	TORRANCE
C & L TOWING	150.875	KLO306	CULVERCITY

CONTAINER FREIGHT	160.155	WXF957 WILMINGTON
DEXTER FILM SERVICE	173.225	KMF614 HOLLYWOOD
DHL AIRWAYS INC.	809.2125	WRE424 L.A.
	854.2125	WRE424 L.A.
DUTY FREE SHOPPERS LAX INC.	462.650	KAD5510 L.A.
	467.650	KAD5510 L.A.
EMERY AIR FREIGHT CORP.	810.8875	KB27178 L.A.
	855.8875	KB27178 L.A.
FONTANA STEEL COMPANY INC.	451.275	KTM325 FONTANA
	456.275	KTM325 FONTANA
GAF CORP.	451.425	KB30963 FONTANA
GENERAL MILLS INC.	462.375	KWJ555 VALLEJO
GENERAL MILLS INC.	462.375	KWJ555 L.A.
GENERAL MILLS INC.	153.335	KWJ555 VALLEJO
GENERAL MILLS INC.	153.335	KWJ555 L.A.
GOODYEAR TIRE/RUBBER CO.	150.000	KB42824 L.A.
HERSHEY FOODS CORP.	153.380	KNHY913 L.A.
HUNT WESSON FOODS INC.	153.050	KJO237 FULLERTON
(?)	427.375	KEU499 FULLERTON
	467.375	KEU499 FULLERTON
IBM CORP.	153.260	KCH556 L.A.
	153.350	KVP855 L.A.
	153.185	WVL933 L.A.
MATTEL INC.	153.260	KLN413 HAWTHORNE
	462.600	KAC8062 HAWTHORNE
	467.600	KAC8062 HAWTHORNE
MOTION PICTURE TRANSPORTATION	472.7375	KYB460 HOLLYWOOD
	475.7375	KYB460 HOLLYWOOD
NEC ELECTRONICS INC.	153.080	KNIY680 L.A.

NOW--WE HAVE THIS INFORMATION FROM A MEMBER IN SAN JOAQUIN COUNTY CALIF. WHO WISHES TO REMAIN NAMELESS-----
THANK YOU--NAMELESS !

42.96	ALL SALES AND RENTAL
42.96	DELTA PUMP CO.
47.68	HORTON CONSTRUCTION
48.74	UNION OIL CO.
156.60	STOCKTON YACHT CLUB
122.95	A G SPANOS JET CENTER
150.815	REED & SON TOWING
150.845	WESTERN BODY SHOP
151.52	UNIVERSAL PUMP & SUPPLY
151.655	SAN JOAQUIN CONSTRUCTION
151.715	AMERICAN PROTECTIVE SERVICE
151.715	LAUGHLIN ALARM SERVICE
151.715	STOCKTON FORD TRACTOR
151.745	UNIVERSITY OF THE PACIFIC
151.745	CECILS SAFE LOCK CO.
151.745	BRANNON TIRE CORP.
151.745	SUNRISE AUTO REPAIR
151.805	VERNS CHEVRON
43.15	ACME GLASS(MANTECA)

We also have, from our good friend STEVE BATES IA-056, some info on a statewide 800 mhz trunked mobile phone system in IOWA. STEVE mentions that he does not have info on ALGONA, AMES, ATLANTIC, BROOKLYN and BURLINGTON in IA. He would like to see some other member contribute that info, to make this list complete.

TOWER SITE	TRUNKED SYSTEM FREQ.		
CEDAR RAPIDS	861.8125-866.8125	KNDC457	RACOM
CEDAR RAPIDS	861.2375-866.2375	KNDC237	MOTOROLA
CEDAR RAPIDS	856.6125-860.6125		
CEDAR RAPIDS	861.9875-866.9875	KNAV259	
DAVENPORT	861.7875-866.7875	KNBV440	RACOM
DAVENPORT	856.6375-860.6375	KNIY813	EF JOHNSON
DECORAH	861.8875-866.8875	KNDC469	
DENISON	861.9375-866.9375	KNJS236	
DES MOINES	861.7875-866.7875	KNDC495	RACOM

DES MOINES	856.0125-860.0125	·NJH469	EF JOHNSON
DES MOINES	856.6375-860.6375	KNHH541	FAIRCHILD
DES MOINES	861.9575-866.9875	KNBB730	ELEC. ENG.
DUBUQUE	861.7375-866.7375	WNCA687	
FT. DODGE	861.8875-866.8875	KNDC463	
IA. CITY	861.8625-866.8625	KNHH651	RACOM
IA. CITY	856.6875-860.6875	KNIT812	EF JOHNSON
IA. FALLS	861.8625-866.8625	KNJT613	
MANCHESTER	861.9125-866.9125	KNJN598	
MARSHALLTOWN	861.7625-866.7625	KNDC458	
MASON CITY	861.7875-866.7875	KNDC468	RACOM
MASON CITY	856.6375-860.6375	KNHH478	SWANT. K.
MASON CITY	861.9875-866.9875	KNBX851	EIDE ELT.
NEW HAMPTON	861.9375-866.9375	WNAF892	
OAKLAND	861.8675-866.8675	WNAF868	
OGDEN	861.8125-866.8125	WNAC204	
PELLA	861.6875-866.6875	KNJU900	
PEDFIELD	861.8375-866.8375	KNJN554	
SIOUX CITY	861.8375-866.8375	KNDC462	RACOM
SIOUX CITY	856.6375-866.6375	KNIT901	
WATERLOO	861.8375-866.8275	KNDC461	RACOM
WATERLOO	861.4875-866.4875	KNCD370	EIDE ELT.
W. DES MOINES	NO LISTING AVAIL		
VENTURA	NO LISTING AVAIL		

OUR THANKS GO OUT TO ROBERT STOFFEL CA OR 026 THE CONTRIBUTIONS FOR THIS COLUMN HAVE HAVE BEEN ALMOST "NIL" LATELY. COME ON OUT THERE, WE CAN DO BETTER THAN THAT CAN'T WE.

MISC BUSINESS FOR SOUTHERN CALIFORNIA.

P.P.G INDUSTRIES (TORRANCE)	153.38	KJP233
WESTERN MEDICAL CTR (SANTA ANA)	35.08	KBC273
" " " " "	464.525	KKY342
ROCK AND WATERSCAPE	461.65	KND0970
ANHEUSER BUSCH (VAN NUYS)	153.140	KRH770
" " " "	158.415	KRH770
VISCOUNT HOTEL (MONTROSE)	852.1375	KMJ794
MISSION COMMUNITY HOSPITAL	35.68	WNAB308
NORTHRIDGE HOSPITAL	461.75	WNAS257
ST. FRANCIS HOSPITAL	453.075	KUX246
" " "	463.375	KWK571
" " "	462.600	KAD3147
SUPER SHUTTLE (L.A.)	856.4125	
CROWNE PLAZA (L.A.)	464.525	
BURBANK HILTON (AIRPORT)	464.675	
SADDLEBACK COLLEGE	461.1125	
LAKEWOOD MALL	464.325	
CHEVRON (LA HABRA)	451.375	KWE235
EMERALD BAY SECURITY (LAGUNA BEACH)	464.875	KNGH949
QUEEN OF ANGELS MEDICAL CTR (L.A.)	151.865	KNHT740
MIDWAY HOSPITAL (L.A.)	151.955	KLO876
WHITE MEMORIAL MEDICAL CTR (L.A.)	43.64	KWM859
" " " " "	461.675	WDK617

THANKS ROBERT

THE FOLLOWING COMES FROM SCANNERS UNLIMITED IN SAN CARLOS CALIF.

CALIFORNIA LISTING

30.88	KNAP764	ELKHORNE TOWING	SAN FRAN.
31.00	KFW924	PORTAS BODY SHOP	REDWOOD CITY
35.94	WSE474	CALIF. TOW SVC	SAN FRAN.
42.96	FTJ847	RONS SHELL STATION	MARTINEZ
150.845	KDV713	DONS CHEVRON	MILL VALLEY
150.860	KUJ620	DEPENDABLE TOWING	SAN RAFAEL
150.875	KCN617	JENKINS BROS.	OAKLAND
150.890	KVK954	ALVISO AUTOMOBILE	ALVISO
150.905	KMF281	A.A.A. TOWING	RICHMOND
151.655	KWZ602	ALAMO SHELL SVC	ALAMO
151.685	KBN225	EVENS TOW SVC	ANTIOCH
151.715	KNCN707	RICH'S TOWING	HAYWARD
151.745	WQR433	HENRY'S SVC	OAKLAND

"The Largest Dealer of Scanners in the World"

SCANNER WORLD, USA

10 New Scotland Ave., Albany, NY 12208 518/436-9606

Special Purchase SALE!!

The Regency Z30

30 Channel Automatic/Programmable Scanner

Suggested Factory List Price $279.95

Z30 FEATURES:

- ***30 Channels***—*For full coverage and easy selection.*
- ***No Crystals Required***—*Your choice of over 15,000 frequencies just by pushing a raised type button on the keyboard face.*
- ***6 Bands***—*Covers high and low VHF, UHF and UHF "T" plus two FM Ham Bands.*
- ***Search or Scan***—*Scan frequencies you have entered or search for exciting new frequencies.*
- ***Priority Control***—*Automatically overrides all other calls to listen to your favorite frequency.*
- ***Alarm Clock***—*Quartz Clock with programmable alarm.*
- ***Permanent Backup System***—*Memory requires no batteries. Capacitor saves frequencies entered up to one week during power outage or storage.*
- ***Dual Level Display***—*Selects brightness level of green vacuum flourescent digital display.*
- ***Channel Lockout***—*Skips channels not of current interest.*
- ***Scan Delay***—*Lets you set a delay so that replies to calls will be heard before scanning resumes.*
- ***Display Messages***—*Display flashes verbal messages to aid in programming.*
- ***External Antenna Jack***—*Permits maximum reception*
- ***External Speaker Jack***—*Standard connection allows use of external speaker.*
- ***AC or DC***—*Use at home or on the go. AC Home Power Cord Included.*
- ***Telescoping Antenna***—*Electronically optimized for all frequencies, included.*
- ***UL Listed/FCC Certified*** *Assurance of quality, American made design and manufacturer, made in USA.*

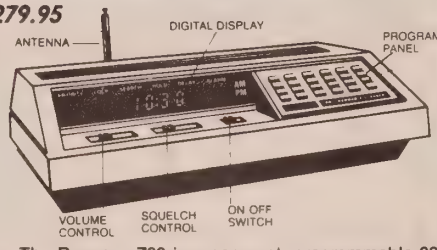
Scanner World Special

REGENCY Z30

$129.99

(plus $5.50 shipping each)

Optional Accessories:
Cigarette Lighter Plug RGMPC . $4.95
Z Mobile Bracket — ***Special*** . . . $5.99



The Regency Z30 is a compact, programmable 30 channel, multi band, FM monitor receiver for use at home or on the road. It is double conversion, super heterodyne used to receive the narrow band FM communications in the amateur, public safety and business bands: 30-50, 144-174, and 440-512 MHz. Size 10¾"Wx2-7/8"Hx8-3/8"D.

Sophisticated microprocess-controlled circuitry eliminates the need for crystals, instead, the frequency for each channel is programmed through the numbered keyboard similar to the one used on a telephone. A "beep" acknowledges contact each time a key is touched. The Z30 scans approximately 15 channels per second.

Any combination of two to thirty channels can be scanned automatically, or the unit can be set on manual for continuous monitoring of any one channel. In addition, the search function locates unknown frequencies within a band.

Other features include scan delay, priority and a bright/dim switch to control the brightness of the 9-digit Vacuum-Fluorescent display. The Z30 can be operated on either 120 VAC or 12 VDC. Includes one year warranty from Regency Electronics (optional 3 yr extended warranty only $35, gives you a total of 4 yrs complete warranty or 2 yr extended warranty only $25, gives you a total of 3 yrs complete warranty.)

REGENCY HX1200

Digital programmable 45 channel hand-held Scanner. Frequency coverage 30-50MHz, 118-136MHz, 144-174MHz, 406-420MHz, 440-512MHz. Covers public service bands plus Aircraft. Has priority, search, lockout, scan plus much more. Package includes HX1200, AC charger/adapter, ni-cad battery, carry case, rubber antenna and 90 day factory warranty.

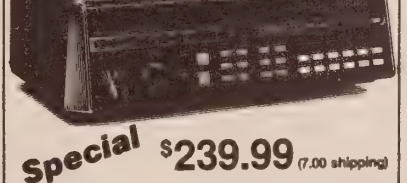
Complete package only . . . . **$216.95** *(6.50 shipping)*
(3 year extended warranty only $35.00, 2 year $25.00)

BEARCAT 50XL Programmable Hand-Held	124.99	(5.00)
AD100U AC Adapter/Charger for 50 XL	12.95	(*)
BP50 Ni-Cad Battery Pack for 50XL	12.95	(*)
BEARCAT 180 AC Digital Scanner	159.99	(5.00)
BEARCAT 140 AC Programmable Scanner	94.99	(5.00)
BEARCAT 145XL AC Programmable Scanner	104.99	(5.00)
BEARCAT 175XL AC Digital Scanner	159.99	(5.00)
BEARCAT 100XL Digital Hand-held	199.99	(6.50)
BEARCAT 210XW AC/DC Digital Scanner	199.99	(6.50)
BEARCAT 15 AC/DC Crystal Scanner	99.99	(5.00)
BEARCAT 20/20 AC/DC Digital Scanner	229.99	(5.50)
BEARCAT 280 AC/DC Digital Scanner	219.99	(6.00)
BEARCAT 300 AC/DC Digital Scanner	239.99	(7.00)
BEARCAT 800 XLT AC/DC Digital Scanner	319.99	(6.00)
BEARCAT DX-1000 Shortwave Receiver	439.99	(12.00)
REGENCY HX-1200 Digital Hand-held 45 Channel	216.99	(6.50)
REGENCY MA-257 Cigarette cord for HX1000/1200	16.99	(*)
REGENCY MA-917 Ni-cad Battery for HX1000/1200	24.99	(*)
REGENCY HX-CASE Hvy Leath. case for HX1000/1200	34.99	(*)
REGENCY MA-256 Drop in charger for HX1000/1200	69.99	(3.50)
REGENCY R-1060 Programmable 10 chan. AC Scanner	94.99	(5.00)
REGENCY HX-2000 Digital Hand-Held	299.99	(6.50)
REGENCY MX-3000 AC/DC Digital Scanner	198.99	(6.50)
REGENCY MX-4000 AC/DC Digital Scanner	319.99	(6.50)
REGENCY MX-5000 AC/DC Digital Scanner	329.99	(6.50)
REGENCY MX-7000 AC/DC Digital Scanner	399.99	(7.00)
REGENCY Z-30 AC/DC Digital Scanner	129.99	(5.50)
REGENCY Z-45 AC/DC Digital Scanner	159.99	(5.00)
REGENCY Z-60 AC/DC Digital Scanner	178.99	(5.50)
Mobile Mounting Bracket for Z Scanners	5.99	(*)
REGENCY D-810 AC Digital Scanner	178.99	(5.50)
REGENCY ACT-R-106 AC/DC Crys. Scanner	96.99	(4.50)
REGENCY ACT-R-1 AC/DC Crys. Single Channel	75.99	(4.00)
REGENCY RH-256 High Band Transceiver	399.99	(7.75)
REGENCY UC 102 Hi-VHF Hand Transceiver	119.99	(5.50)
REGENCY RU150B UHF Transceiver	439.99	(7.75)
Book "Top Secret Registry of Gov't Freuency"	12.95	(*)
Book "Covert Intelligence, Electronic Eavesdropping"	8.95	(*)
Book "Betty Bearcat Frequency Directory"	14.95	(*)
Book "Rail Scan Directory"	7.95	(*)
Book "Air Scan Directory"	12.95	(*)
RCD MRP-1 Single Channel Hand-Held	38.99	(3.00)
JIL SX-200 AC/DC Digital Scanner	189.99	(6.75)
JIL SX-400 DC Digital Scanner	399.99	(12.00)
FANON M8HLU DC Crystal Scanner	99.99	(5.00)
FANON PSK-1 AC Adapted for M8HLU	12.99	(*)
FANON Slim-6 HLU Crystal Hand-held Scanner	98.99	(5.00)
FOX BMP-1060 AC/DC Digital Scanner	129.99	(5.50)
FOX Mounting Bracket for BMP-1060	9.99	(*)
WHISTLER Spectrum Radar Detector	199.99	(5.00)
WHISTLER Remote Spectrum Radar Detector	199.99	(5.00)
ANT-1 Magnet Mount Mobile Scanner Antenna	29.99	(3.00)
ANT-6 Base Scanner Antenna w/50' cable	29.99	(3.00)

EXTENDED WARRANTY PROGRAM
2 EXTRA YEARS — ONLY $25.00

Scanner World is pleased to offer extended warranty protection on your scanner purchases. For a one time charge of only $35.00, we will provide you with 3 additional years of warranty protection after your original warranty expires. *Extended warranty program is available for all types of electronics such as two-way radios, scanners, TVs, VCR, 35mm cameras, personal computers, CBs, radar detectors, stereo equipment, etc. Scanner World can offer this program to all customers, even if product was not purchased from Scanner World. All we need is a copy of your invoice showing purchase within last 30 days. For more information and rates, refer to our latest Catalogue or drop us a note.*

Bearcat® 300



Special $239.99 (7.00 shipping)

50 Channels — Mobile/Base

Features include simple raised button keyboard programming of the following frequency ranges: 32-50 MHz, 118-136 MHz, 144-174 MHz, 421-512 MHz. Vacuum flourescent dipslay, dim control, priority, count transmissions, non-volatile memory retains memory without power back-up, automatic search, scan speed control, automatic search, scan delay, lockout, service search, automatic squelch, crystalless, digital clock, external speaker & tape jack, auxiliary equipment control, plus much more. Built inside the rugged metal cabinet. Includes AC & DC cords, telescopic antenna, mobile mounting kit, and one year factory warrantee on the Bearcat 300 for only $239.00 and $7.00 shipping. (Optional extended warranty: 3 years $35, or 2 years $25.

Bearcat 100 XL

$199.99 (6.50 shipping) *Handheld digital programmable, no crystal portable scanner. 16 channels, search feature, plus more! Frequency range: 30-50, 118-174, 406-512 MHz. Included in the package is a flexible rubber antenna, earphone, battery charger/AC adapter, 6 AA Ni-Cad rechargeable batteries and a heavy duty carry case. All for the low price of.*

$199.99 (6.50 shipping)
(3 year extended warranty only $35.00, 2 year $25.00)

REGENCY RH-256 B
PROGRAMMABLE TRANSCEIVER

RH-256B Transceiver, 16 channel 12 VDC 2-way Radio fully programmable in transmit and receive mode. Includes built-in CTCSS tones for encode/decode, time-out timer, scan delay, 25 watts transmit power, priority, plus more. Frequency spread as shipped 152-158 MHz. Package includes mobile mike, bracket, mobile antenna, and all cables and instructions for installation. ***Special package deal only:*** **$399.99** *(7.75 shipping)*
(2 year extended warranty $49.00 — 3 year $69.00)

ORDERING INFORMATION

Call (518) 436-9606 to place orders by phone or mail orders to ***Scanner World,*** 10 New Scotland Av., Albany, NY 12208. Orders will be shipped same day received by United Parcel Service. ***Scanner World*** accepts VISA, MasterCard (COD shipments by United Parcel will be for cash or certified checks only). Mail orders with personal or business checks will be held 4 weeks for bank clearance. Orders with cashiers checks or money orders shipped same day received. Prices, specifications and terms subject to change without prior notice. If items are out of stock we will backorder and notify you of delivery date. All shipments are F.O.B. ***Scanner World*** warehouse in Albany, NY. We are not responsible for typographical errors. All merchandise carries full manufacturers warranty. Bid Proposals and Purchase orders accepted from Government agencies. Free full line catalogue available upon request. No minimum order. New York State Residents add 7% sales tax.

SHIPPING CHARGES

(*) Add ($) per scanner, and $3.00* for all accessories ordered at same time. C.O.D. shipments will be charged an additional $3.00 per package. Full insurance is included in shipping charges. All orders are shipped by United Parcel Service. Shipping charges are for continental USA only. Outside of continental USA, ask for shipping charge per scanner.

Scanner World, USA
10 New Scotland Ave., Albany, NY 12208
(518) 436-9606
Most orders Shipped Same Day Received!

PAID ADVERTISING

CANADA

Send Canadian frequency information, radio system details and other information relating to Canadian monitor radio listening and questions to:

Rob Berezowski, 310-4045 Rae St, Regina, Saskatchewan, Canada S4S 6Y8

Greetings once again and welcome to the September Canada column. This month I thought I would spice things up by including a contribution from yours truly. So without further delay, here is a list for the Regina area.

REGINA REGION

Regina City Police	Dispatch	Ch 1	413.0125/	418.0125in
	CPIC/NCIC ("200")	2	413.1625/	418.1625in
	CPIC/NCIC ("300")	3	413.4125/	418.4125in
	CID Detectives	4	413.5875/	418.5875in
	Tactical / Car to Car	5	413.7875/	418.7875in
	CID Detectives Tactical	6	413.8625/	413.8625
Wascana Park Police			156.000 /	155.280in
RCMP Provincial Repeater Network (F Division)		1	155.430 /	154.370in
" " "		2	155.580 /	154.890in
" " "		3	155.700 /	154.950in
" " "		4	155.640 /	154.830in
" " "		5	156.030 /	155.070in
" " "		6	155.610 /	155.040in
" " "		7	?	
" " "		8	?	
" Simplex "Local" Channel		9	155.670 /	155.670
" " Municipal		10	155.460 /	155.460
" " Operations		11	155.310 /	155.310
" Repeater Network		12	155.430 /	154.800in
" " "		13	155.640 /	155.040in
Regina "Depot" Division	Depot Operations		155.130 /	155.130
	Training		155.490 /	154.800in

(The RCMP are phasing in new digital synthesis radios with the channel numbers as given above. The old radios are gradually being replaced across the province. The Regina Sub-Division is in the conversion process, and it appears that the other sub-divisions are further behind.

Regina is served by the Pilot Butte repeater on channel 3.)

Regina City Fire Dept	Dispatch/Enroute	Ch 1	155.220 /	155.850in
	Fireground Tactical	2	155.970 /	155.970
	Service Vehicles/Admin	3	155.895 /	156.225in
	Pager		155.895	
Regina Emergency Measures Organization			27.800 /	27.800
" " " "			149.495 /	149.495
" " " "			149.525 /	148.685in
" " " "			462.950 /	462.950
Olson's Ambulance (Regina)			158.760 /	158.760
City of Regina	Engineering and Public Works	1	157.110 /	156.270in
	" " " "	2	157.200 /	156.360in
	" " " "	3	157.080 /	156.120in
	Parks Dept		169.200 /	169.200
	Purchasing Dept		169.200 /	169.200
	Transit System	1	460.300 /	465.3125in
	" "	2	460.125 /	465.1275in
	" "	3	460.175 /	465.1875in
Bank of Canada			151.055 /	151.055
Canada Post Office			411.7625/	416.7625in
	Priority Post Courier		469.2875/	469.2875
Communications Canada (DOC)			149.080 /	149.080
Environment Canada - Weatheradio Canada Lumsden			162.550	
Transport Canada	Regina Airport Operations		460.200 /	465.2125in
	" " Fire Dept		460.3375/	465.3375in
	" " Field Operations		121.900 /	121.900

SaskTel	Provincial Repeater Network	Ch 1	138.555 /	142.665in
	" " "	2	138.465 /	142.245in
	" " "	3	138.615 /	142.215in
	" " "	4	138.585 /	142.275in
	" " "	5	138.675 /	142.455in
	" Simplex	6	139.500 /	139.500

(In Regina, Customer Services operate on Ch 1 and Network Services operate on Ch 5.)

Sask Power	Provincial Repeater Network	Ch 1	139.290 /	141.750in
	" " "	2	139.260 /	141.720in
	" " "	3	139.200 /	141.690in
	" " "	4	139.170 /	141.660in
	" " "	5	139.140 /	141.630in
	" " "	6	139.110 /	141.600in
	" " "	7	139.080 /	141.570in
	" Simplex	8	140.400 /	140.400
	" "	9	140.310 /	140.310

(In Regina, Electrical Service & Trouble calls are on Ch 7, and Natural Gas Service is on Ch 6.)

Sask Highways	Provincial Repeater Network	Ch 1	166.830 /	167.400in
	" " "	2	166.860 /	167.430in
	" " "	3	166.890 /	167.850in
	" Simplex		168.030 /	168.030
Sask Highway Traffic Board (Transport Patrol)			157.290 /	157.290
Sask Dept of Parks & Renewable Resources				
	Provincial Repeater Network		163.110 /	164.130in
	" " "		163.140 /	162.570in
	" " "		163.200 /	162.660in
	" " "		163.260 /	162.600in
	" " "		163.410 /	162.720in
	" " "		163.410 /	162.780in
	" " "		163.560 /	162.720in
	" " "		163.560 /	162.780in
	" " "		165.690 /	164.760in
	" Simplex		162.840 /	162.840
	" "		163.050 /	163.050
	" "		163.110 /	163.110
	" "		163.140 /	163.140
	" "		163.200 /	163.200
	" "		163.260 /	163.260
	" "		163.410 /	163.410
	" "		163.560 /	163.560
	" "		165.690 /	165.690
	Aircraft		122.600 /	122.600
	"		122.700 /	122.700
	"		122.800 /	122.800
	"		122.900 /	122.900
	"		123.200 /	123.200

(The above frequencies are used for Forest Fire Fighting in Northern Saskatchewan, by Park Wardens in Provincial Parks, and by Fish & Game Wardens province-wide. In Regina, Game Wardens use 163.110 (S), with a repeater 163.110 (R) at Buffalo Pound west of Regina. The McLean repeater east of Regina is on 163.560 (R).)

Sask Corrections Branch - Regina Correctional Ctr		156.090 /	156.090
Sask Centre for the Performing Arts (Regina)		464.0625/	464.0625
Sask Council for Disabled (Handi-Bus)		172.710 /	172.710
Sask Supply & Services - Central Govt Mail Service		170.430 /	170.430
Regina General Hospital	Security	173.550 /	173.550
	Pager	458.4625	
Regina Pasqua Hospital	Pager	458.4625	
Regina Plains Health Centre	Pager	149.020	
	"	458.4625	
University of Regina Physical Plant/Maintenance		456.700 /	451.200in
News Media Can. Broad. Corp (CBC)	Pager	450.0125	
" " " "	TV Photographers	450.7125/	455.7125in
" " " "	(Unknown)	450.7875/	450.7875

	CFMQ-FM Studio-Transmitter Link	956.125
	CIZL-FM Studio-Transmitter Link	957.125
	CJME-AM / CIZL-FM Remote Broadcasts	153.350 / 153.350
	" " " "	455.9375 (Mobile)
	CJME-AM Studio-Transmitter Link	450.4625
	CKCK-AM / CKIT-FM News Reporters	462.450 / 462.450
	CKCK-AM Studio-Transmitter Link	455.4625
	CKCK TV News Photographers/Reporters	153.110 / 153.110
	CKIT-FM Studio-Transmitter Link	956.625
	CKRM-AM / CFMQ-FM News Reporters	152.990 / 152.990
	CKRM-AM Studio-Transmitter Link	450.2875
	Regina Leader Post Photographers Pager	164.280
Regina Cable TV		162.120 / 162.120
SaskTel	Page Call Pager (Province wide)	149.770
	Automatic Mobile Telephone System (AMTS)	152.645 / 157.905in
	" " " " "	152.825 / 158.085in
	General Mobile Telephone Service	152.510 / 157.770in
	" " " "	152.720 / 157.980in
	" " " "	152.780 / 158.040in
Canadian General Electric	Public Business Repeater	143.835 / 148.615in
	" " "	163.680 / 167.460in
	" " "	172.920 / 173.580in
	Trunked System	422.1875/ 427.1875in
	" "	422.2875/ 427.2875in
	" "	422.3875/ 427.3875in
	" "	422.4875/ 427.4875in
	" "	422.5875/ 427.5875in
Motorola Canada	Pager	139.770
	Public Business Repeaters	143.355 / 148.315in
	" " "	164.550 / 168.570in
	" " "	451.5125/ 456.5125in
	Privacy Plus Trunked System	858.2375/ 813.2375in
	" " " "	858.4875/ 813.4875in
	" " " "	858.7375/ 813.7375in
	" " " "	858.9875/ 813.9875in
	" " " "	859.2375/ 813.2375in
Brinks Canada		453.1375/ 453.1375
Loomis Courier & Armoured Car Service		157.680 / 157.680
Trojan Security		172.920 / 173.580in
Guardian Investigation Services		165.060 / 165.060
International Security Advisors Ltd		464.6125/ 464.6125
Pioneer Security Control & Exhibition Security		172.380 / 172.380
Saskatchewan Legislature Security		172.920 / 173.580in
Air Canada Ramp and Gate Operations		460.700 / 460.700
Pacific Western Airlines Ramp and Gate Operations		170.670 / 170.670
Taxi	Capitol Cabs	152.270 / 152.270
	Co-Op Taxi Lines	150.815 / 150.815
	Regina Cabs Ltd	150.905 / 150.905
Purolator Courier		170.880 / 170.880
Saskatchewan Motor Club		165.990 / 165.990
Radio Amateur	VE5 RRG	147.120 / 147.720in
	VE5 SS	146.880 / 146.280in
	VE5 UHF	444.000 / 449.000in
Consumers Co-Op Refineries	Refinery Operations	463.800 / 468.8125in
	" "	463.950 / 468.9625in
Interprovincial Pipelines Ltd		162.690 / 163.980in
" " "		162.690 / 162.690
Interprovincial Steel & Pipe Corp (IPSCO)		172.860 / 172.860
" " " " " "		173.130 / 173.130
" " " " " "		469.0375
Trans-Canada Pipelines	(Pipeline Operations)	162.420 / 159.360in
	" "	162.420 / 162.420

(As I mentioned last month, this is a Canada-wide allocation. Regina area repeaters are located at Belle Plaine west of Regina and McLean east of Regina -ed)

Regina S.P.C.A.		165.600 / 165.600
Regina Dog Pound		172.920 / 173.580in

Well, that's about all for this month. For me, it's time to pack away the word processor for another month, and get ready for my vacation. Take care everyone and I'll see you next month.

COMMUNICATIONS PROFILE

Joe M. Lewis, 750 Scotland St., Dunedin, FL 33528

This column is for special projects that explain various systems in detail. Frequencies and radio codes of not only municipal agencies and certain federal government agencies may be listed, but also large businesses and corporations. The contribution must be lengthy enough that publishing it in one of the regular columns would not be possible. If you are inclined to submit a report as the one below appears, please follow No. 8 in the inside front cover of the Newsletter.

WELCOME TO THIS MONTH'S COLUMN,THIS MONTH A LOOK AT THE CALIFORINA HIGHWAY PATROL, FROM NATHAN B. YOUNG, OF "CODE 20".NEXT MONTH WILL BE THE SUFFOLK COUNTY, N.Y. FIRE. I RECEIVED A NICE ARTICAL FROM DON GRUVER,KSO10, ON WESTERN KANSAS EMS, WHICH SHOULD BE IN THE OCTOBER COLUMN. AND NOW TO THE CALIFORNIA HIGHWAY PATROL.

THE CALIFORNIA HIGHWAY PATROL IS THE MOST POPULAR STATE POLICE FORCE IN THE U.S. BECAUSE OF TV SHOWS LIKE THE OLD "HIGHWAY PATROL" SERIES IN THE 1950'S AND THE HIGHLLY RATED "CHIPS" SERIES, AS WELL AS RECENT TV COMMERCIALS. BACK IN THE 1930'S AND 1940'S AND IN TO THE EARLY 1950'S, THE CHP HAD ONLY ONE OR TWO VOICE-TYPE COMMUNICATION CHANNELS TO COVER THEIR ENTIRE STATE-WIDE EMERGENCY NEEDS. TODAY, CHP COMMUNICATIONS ARE CONDUCTED PIMARILY ON VHF LOW BAND, 42MHZ. THE SYSTEM IS DIVIDED INTO FIFTEEN DUPLEX PAIRS OF FREQUENCIES, FOURTEEN ARE ASSIGNED AS GENERAL DISPATCH CHANNELS FOR MOST OF THE DISTRICT STATIONS SERVING EACH OF THE EIGHT DIVISIONS. WITH ONE COMMON CHANNEL PAIR FOR EVER STATION, PATROL CAR AND AIR UNIT THROUGHOUT THE STATE. THIS CHANNEL IS ALSO AN AUX. FREQ. FOR MANY OTHER STATE, COUNTY,LOCAL, AND EVEN FEDERAL AGENCIES.ALL FIFTEEN CHANNELS IN THE SYSTEM ARE COLOR CODED AND EACH FREQ.IN THE PAIR ARE NUMBERED. FREQ. 1 IS THE BASE RECEIVER CHANNEL, AND ALL MOBILE UNITS TRANSMIT ON THIS SIDE OF THE PAIR TO THEIR DISPATCHER. FRE.2 IS THE MOBILE UNIT RECEIVER CHANNEL. ALSO ALL UNITS CAN TALK, CAR-CAR,AIR TO GROUND,AND BASE TO MOBILE.THE AUX. CHANNEL IS CALLED THE BLUE CHANNEL AND IS MONITORED BY ALL DISPATCH STATIONS AND MOBILE UNITS TRAVELING OUT OF THEIR ASSIGNED DISPATCH AREAS. THERE IS NO ROAD OR HIGHWAY IN THE STATE THAT IS NOT COVERAED BY THE BLUE CHANNEL. THE CHP HEADQUARTERS IN SACRAMENTO COVERS 58 COUNTIES, AND 158,693 SQUARE MILES, WHICH ARE DIVIDED INTO EIGHT COMMAND DISTRICTS. THE CHP UTILIZES 2,055 PATROL CARS, 295 MOTORCYCLES, 7 HELICOPTORS, 8 FIXED WING AIRCRAFT, 2,615 MOBILE VEHICLE REPEATERS, AND 2,248 HAND-HELD PORTABLES. IN THE SPRING OF 1981,NEW HAND-HELD PORTABLE RADIOS WERE ISSUED TO AID THE PATROLMAN WHO IS AWAY FROM HIS OR HER PATROL CAR.THIS SYSTEM IS REFERRED TO THE VEHICULAR REPEATER SYSTEM WHICH RE-TRANSMITS THE OFFICER'S HAND-HELD RADIO SIGNAL VIA A MOBILE REPEATER IN THE PATROL CAR, ON 42.MHZ BACK TO THE DISTRICT STATION. ALL OF THESE HAND-HELDS ARE ON VHF HIGH BAND WITH 2.5 WATTS. THE TWO FREQS ARE CHANNEL 1 154.905 WHICH KEYS THE MOBILE REPEATER,CHANNEL 2 IS 154.92 WHICH IS THE CALIF. LAW ENFORCEMENT MUTUAL AID RADIO SYATEM. IN THE SIMPLEX MODE, TO AID OTHER AGENCIES IN AN EMERGENCY. THE CHP IS A DEPT. IN THE BUSINESS,TRANSPORTATION AND HOUSING AGENCY OF THE STATE OF CALIFORNIA.THE CHP MISSION IS TO MANAGE AND REGULATE THE TRAFFIC LAWS, AND SAFETY OF THE STATES HIGHWAYS.FOLLOWING IS A LIST OF FREQS., AND DISTRICT LOCATIONS.

CHP STATEWIDE COLOR CODE RADIO SYSTEM

COLOR	FREQ #	FREQ	USE	MOBILE
BLACK	1	42.46	DISPATCH	42.70
	2	42.46	CAR/CAR SIMPLEX	
BLUE	1	42.34	STATEWIDE COMMON	42.18
	2	42.34	CAR/CAR, TACH SIMPLEX	
BROWN	1	42.50	DISPATCH	42.82
	2	42.50	CAR/CAR, SIMPLEX	
COPPER	1	42.60	DISPATCH	42.74
	2	42.60	CAR/CAR, SIMPLEX	

GOLD	1	42.12	DISPATCH	42.74
	2	42.12	CAR/CAR SIMPLEX	
GREEN	1	42.54	DISPATCH	42.24
	2	42.54	CAR/CAR SIMPLEX	
GREY	1	42.48	DISPATCH	42.68
	2	42.48	CAR/CAR SIMPLEX	
ORANGE	1	42.88	DISPATCH	42.66
	2	42.88	CAR/CAR SIMPLEX	
PINK	1	42.44	DISPATCH	42.76
	2	42.44	CAR/CAR SIMPLEX	
PURPLE	1	42.40	DISPATCH	42.16
	2	42.40	CAR/CAR SIMPLEX	
RED	1	42.44	DISPATCH	42.28
	2	42.44	CAR/CAR SIMPLEX	
SILVER	1	42.08	DISPATCH	42.28
	2	42.08	CAR/CAR SIMPLEX	
TAN	1	42.42	DISPATCH	42.84
	2	42.42	CAR/CAR SIMPLEX	
WHITE	1	42.56	DISPATCH	42.72
	2	42.56	CAR/CAR SIMPLEX	
YELLOW	1	42.52	DISPATCH	42.30
	2	42.52	CAR/CAR SIMPLEX	

DISTRICT #	LOCATION	DIV #	COLOR
2	TRAINING, BLYTH	6	BROWN,BLUE
3	BUELLTON	7	WHITE
4	RADIO REPAIR SERVICE SW		ALL
5	L.A DIV ADMIN,	5	CELMARS
6	BLYTHE	6	RED
7	LAKEPORT	1	WHITE
8	KINGS CITY	7	GREEN
9	PASO ROBLES	7	WHITE
12	VICTORVILLE	8	WHITE
13	LAKE VALLEY	2	GREY
14	SANTA MARIA	7	WHITE
15	CENTRAL L.A.	5	BLACK
16	EUREKA	1	GREEN
17	SANTA ROSA	3	ORANGE
18	UKIAH	1	WHITE
19	CONCORD	3	PURPLE
20	QUINCY	1	SILVER
21	NAPA	3	ORANGE
22	FAIRFIELD	3	PURPLE
23	HOLLISTER	7	GREEN
24	SAN JOSE	3	BROWN
25	HAYWARD	3	TAN
26	SANTA CRUZ	7	BLACK
27	MONTEREY	7	GREEN
28	SAN LUIS OBISPO	7	WHITE
29	SANTA BARBARA	7	GREEN
30	LOS BANOS	4	ORANGE
31	VENTURA	7	PURPLE
32	SAN FRANCISCO	3	PINK
34	MARIN HIGHLANDS	3	SILVER
35	OROVILLE	2	BROWN
36	RED BLUFF	1	RED
37	REDDING	1	RED
38	SUSANVILLE	1	TAN/BLUE
39	WILLIAMS	1	RED
40	PORTORVILLE	4	PINK
41	YREKA	1	TAN/PURPLE
42	GRASS VALLEY	2	GREEN
43	YUBA CITY	2	BROWN
44	PLACERVILLE	2	GREEN
45	AUBURN	2	GREEN
46	SACRAMENTO NORTH	2	GOLD
47	WOODLAND	2	BLACK
48	MODESTO	2	YELLOW
49	SAN ADREAS	2	WHITE
52	MT. SHASTA	1	PURPLE
53	MCARTHUR	1	YELLOW

55	WESMINSTER	6	PURPLE
56	WEST VALLEY (L.A.)	5	BROWN
59	MOJAVE	8	WHITE
60	ALTURAS	1	TAN / BLUE
61	SONORA	4	WHITE
62	STOCKTON	2	WHITE
63	MARIPOSA	4	ORANGE
64	MERCED	4	ORANGE
65	FRESNO	4	SILVER
66	MADERA	4	ORANGE
67	VISALIA	4	PINK
68	HANFORD	4	PINK
69	BAKERSFIELD	4	BROWN
70	GOLD RUN	2	GREY
71	BRIDGEPORT	8	BLUE/SILVER
72	BISHOP	8	BLUE/SILVER
73	BARSTOW TO NEEDLES	8	WHITE
74	RIVERSIDE	8	GREEN
75	SAN BERNARDINO	8	COPPER
76	INDO	6	RED
77	SOUTH L.A.	5	WHITE
78	NEWHALL	5	SILVER
79	WEST L.A.	5	PINK
80	TRUCKEE	2	GREY/RED
81	BALDWIN PARK	5	ORANGE
82	EAST L.A.	5	YELLOW
83	SANTA FE SPRINGS	5	GOLD
84	ONTARIO	5	ORANGE/COPPER
95	EL CENTRO	6	TAN/BLUE
86	SANTA ANA	6	PURPLE
87	SAN DIEGO	6	ORANGE
88	COALINGA	4	PINK
89	ANTELOPE VALLEY	5	SILVER
90	TRINITY RIVER	1	RED
91	REDWOOD CITY	3	SILVER
92	OCEANSIDE	6	GOLD
93	WILLOWS	1	RED
94	JACKSON	2	WHITE
95	CRESENT CITY	1	GREEN
96	OAKLAND	3	GOLD
97	BANNING	8	RED
98	GLENDALE	5	BROWN
100	RIDGECREST	8	YELLOW
101	LAKE ARROWHEAD	8	COPPER
102	FORT TEJON	5	SILVER
103	TRACY	2	YELLOW
104	CHICO	2	BROWN
105	GARBERVILLE	1	GREEN
106	TWENTY-NINE PALMS	8	WHITE
107	DELANO	4	GREY
108	EL CAJON	6	GOLD
109	MALIBU	5	PINK
110	MARICOPA	4	GREY
112	SACRAMENTO SOUTH	2	BLACK
113	SAN JUAN CAPISTRANO	6	PURPLE

THAT IS ALL FOR THIS MONTH, I HOPE EVERYBODY IS HAVING A GOOD SUMMER.

* * * * * *
* SECOND *
* ANNUAL *
* PICNIC *
* * * * * *

The ALL OHIO SCANNER CLUB will host it's second annual summer meeting and picnic on Saturday, August 17, 1986, in Columbus, Ohio. All R.C.M.A. members are invited to attend. For more information, please send a SASE to David B. Marshall OH 146 50 Villa Road, Springfield, OH 45503-1036

contact info wanted

This column has two purposes: to help members *contact* each other, and to help members obtain *information* directly from one another on various subjects related to 2-way communications monitoring. If you desire to converse, meet, or correspond with other members by telephone, letter, or cassette tape in a certain geographic area or with members who have similar listening interest, *this* is the perfect place for you to make known your interests. Remember — those who respond will do directly, so be sure to provide your phone number, the best time to be called, or your address. Write to:

Scott Mattson, 2820 Bridge Ave., Point Pleasant, NJ 08742

INFO WANTED: This member has just purchased a new Bearcat 300 and would like to hear from members who may have some programming tips that are not included in the instruction book.
PAT LYNN (IL-079) 750 State St., Apt. 420, San Diego, CA 92101 (6/86)

INFO WANTED: Member wishes to obtain the schematic diagram for the Bearcat 210 XL. The readout is fading and a local electronics whiz feels that the voltage regulator is at fault. The schematic is needed to locate and diagnose the problem completely. Bearcat service is hard to come by in Canada so any help would be appreciated.
J.B. RAE (CANA-019) 855 Clinton Ave., Peterborough, Ontario, Canada K9L 1A2 (6/86)

INFO WANTED: This member seeks the frequencies for Florida Power & Light, Taxicab companies, plus police & fire codes for the Miami, Miami Beach areas of south Florida. I am a new member and would appreciate the information.
STEVE WACHHOLDER (FL-209) 525 West 28th St., Miami Beach, FL 33140 (6/86)

FCC TOPICS

George DuBois, Editor

FCC news and information of interest relating to two-way communications. Send comments and questions to:
George DuBois, 10048 NE Campaign, Portland, OR 97220

Well, I've got kind of a short column this month. Not as short as Junes, but that's another story. Only two proposals. One, in response to a petition, would allow Amateur Radio operators to use FM multiplex in the 1240 mHz and higher bands. This will allow amateurs to experiment with new techniques and will conserve spectrum in cases where several different channels of information must be transmitted simultaneously between locations.

The other proposal would allocate the band from 1700 to 1710 mHz to the Private Operational-Fixed Microwave service for low power radio links for computer terminals and similar devices. Such links would use extremely low power and the systems would have to be confined to a single building. Five channels, two mHz apart, would be available and all assignments would have to be coordinated. The 1700 - 1710 mHz band is presently allocated on a primary basis to the Meteorlogical-Satellite and the Government Fixed services.

NOSO

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Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

U.S. FOREST SERVICE
DEPARTMENT OF AGRICULTURE

** CALIFORNIA **

Angeles National Forest, KME22

171.5750	F-1 r-out (172.375 in) and F-2 simplex "Angeles"
169.9500	F-3 Fire Net
168.2000	F-4 Intersquad (BIFC Tac-2)
169.1250	F-5 Angeles/Cleveland Intercom Net (Region Five Calling Channel)
169.1750	also reported as F-5
170.0000	F-6 Air/Ground (Common Air Tactics 4)
168.6000	F-7 Tractor Net
169.2000	Primary Air Tactics (Air Tactics 3)
168.1250	Fire Camp
415.225	Mount Lukens (411.225 input) reportedly repeats 171.575
415.325	Johnstone Peak (411.325 input) reportedly repeats 169.950
415.400	Car-to-Car

Chippewa National Forest

164.825	Repeater

Cleveland National Forest, KME23
118.950 Forestry Aircraft
122.925 USFS Air Tanker Ground Control
168.750 F-1, Dispatch, simplex
F-2, repeater output
170.500 F-2, input to 168.750
168.150 F-3, Forest Net
164.125 F-4, Tac-2 Service Net
166.675 Air Tac-1
168.050 Air/Ground Tac
168.200 Region 5 Fire Net "Tac-2"
168.625 South Zone Dispatcher
170.000 F-5, Air-Ground Net

415.250 Link - repeats 161.125
415.275 Link - repeats 168.150
415.425 Link - repeats 168.750
415.450 Link - repeats 168.750
415.550 Link - South Dispatch Zone

Inyo National Forest
168.125 Repeater

Lassen National Forest
166.675 Air
172.225 Repeater

Los Padres National Forest, KME21
170.5500 F-1 R-out (171.545 in and F-2) "Los Padres"
170.4750 F-3 Fire Net
172.3500 F-4
170.0000 Also reported as F-4
168.2000 F-5 Tact. Net (BIFC Tac-2)
172.3500 F-6 Tact. Net (Admin. Secondary)
(This has also been reported as F-2 and F-4)
166.6750 Primary Air Tactics Channel
171.5500 Service Net (Logistics)
169.9000 Control Link

415.325 Santa Ynex/Sisar (411.325 in)
415.425 Tassajara/Rount Mtn. (411.425 in)
412.40 Santa Ynex downlink to Goleta
415.35 Service Net
415.50 Portable logistics repeater
415.05 Handhelds
415.475 Link - repeats 170.550

166.675 Air Tactics 1
168.050 Air/Ground Tac
168.200 Intersquad

Mendolino National Forest
169.175 Fire

Modac National Forest
168.750 Fire

San Bernardino National Forest, KME20
171.475 F-1, Dispatch
F-2, Repeater output
172.225 F-2, input to 171.475
164.125 F-3, Forest Net
169.150 Air Tac
168.800 Air/Ground Tac
415.575 Car-to-Car

415.475 Link - repeats 171.475
415.350 Link - repeats 164.125

Sequoia National Forest, KMB740
168.6750 F-1 (simp) & F-2 (repeater) -- Administrative

168.7750 F-3 Disp. and Primary Fire
F-4 Primary Fire Repeater
168.2000 F-5 Tactical Net (BIFC Tac-2)
170.0000 F-6 Air-to-Ground Common
171.5000 Logistics Service Net
169.150 Primary Air Tactics (Air Tactics 2)

415.3750 Breckenridge link
415.4500 Kernville Site link
415.2250 Shirley Peak link
415.5750 Jordan Peak link

Shasta National Forest
169.200 Air
171.5750 Repeater
415.3750 Point-to-Point

Sierra National Forest, KME26
171.400 F-1, Dispatch
171.475 F-3
169.875 F-4
169.200 Air Tac

South Zone
164.910 South Zone (Frazier Mtn.)
166.560 South Zone (Santiago Peak)
415.475 UHF repeater, Frazier Mtn.
415.525 UHF repeater

168.625 Air Net (168.025 input)
415.55 UHF repeater

168.65 Firescope Primary Project Fires
414.65 UHF repeater

Superior National Forest
169.925 Repeater, KAC235

Trinity National Forest
168.200 Ch-7 Crew Net
170.000 Ch-1 Air-to-Ground

Cal. Dept. of Forestry
168.6250 U.S.F.S. A.D. (In = 168.0250) Air-Net

Non-specific locations
164.9375 USFS Fire (36.75 mobiles)
166.5875 USFS Fire (38.75 mobiles)

** COLORADO **

Arapaho National Forest
169.8750 Operations

Roosevelt National Forest
169.1750 Operations

** FLORIDA **

Ocala National Forest
168.6750 F-1 (talkaround) & F-2 (repeater)
169.9000 F-3 Major Fires
169.1750 F-4 Region VIII Emerg. Channel

** GEORGIA **

Atlanta (and Southeast) Region
168.0250 Air Net (repeater input)
168.1750 Region wide

168.2000 Region wide Aero Detection
168.3500 Shared / Common (other agencies)
168.2500 Air Net (repeater output)
168.7500 Aero Net / Ground Fire Management
169.9000 Fire Management Net
171.5500 Fire Dispatch Net
171.5750 Fire Dispatch Net
410.7750 Secondary, stress telemetry
411.2750 INFEC (Inter Agency Nat'l Emergency Fire Cache) link
414.6500 INFEC link
415.2750 INFEC link
415.5000 INFEC link

** IDAHO **

Boise National Forest
170.6000 Admin. Net 1
169.9750 Admin. Net 2

171.4500 Forest Net 1
172.2000 Forest Net 2
172.2500 Forest Net 3

164.6000 Logistics Net 1
165.4125 Logistics Net 2

168.6250 Air Net 1
168.0250 Air Net 2

168.5500 Aircraft
172.6000 Common Air Safety

415.3000 Boise/Cascade link
415.4000 Cascade/Boise link

Sawtooth National Forest
162.0250 Dispatch
162.2250 Fairfield Ranger Dist., F-3 simplex
411.350 Fairfield Ranger Dist. link for 162.0250

** INDIANA **

Wayne-Hoosier National Forest
164.8250 Dist. Ranger Office R-out (input = 164.1250)

** MISSOURI **

Mark Twain National Forest
168.075 Ch-3 Command, repeater
168.100 Repeater
168.125 Repeater
168.150 Repeater
172.250 Repeater

** NEBRASKA **

Nebraska National Forest
168.625 Repeater, KAH860

**NEW HAMPSHIRE **

White Mountain National Forest
171.5250 Operations repeater (171.5250 input)
KCB579 Laconia, NH
KCB598 Conway, NH
KCB599 Gorham, NH
KCG382 Bethel, ME

KCG383 Littleton, NH
KCG384 Plymouth, NH
KCG386 Bartlett, NH
KDL764 Passaconway, NH

Repeater sites: Loon Mtn., Mt. Washington and Mt. Tecumseh. All located in New Hampshire.

** NEVADA **

Toiyabe National Forest
169.875 Primary, repeater (170.475 input)
411.325 Link for 169.875

Statewide
168.625 Air Net

** NORTH CAROLINA **

Pisgah National Forest
168.725 Forest Rangers, repeater
171.475 Repeater (172.225 input?)

Uwharrie National Forest
168.725 Forest Rangers

** PENNSYLVANIA **

Allegheny National Forest
171.525 Forest Rangers, repeater

** SOUTH DAKOTA **

Black Hills National Forest
166.575 Operations
169.950 Repeater

Custer National Forest
169.175 Repeater, KAH272

** TEXAS **

Caddo National Grasslands, Fannin County
171.4750 Ch-1, simplex
171.4750 Ch-2, Repeater (In = 172.2250)

** VERMONT **

Green Mountain National Forest
169.1750 Repeater (169.9750 input)
KCG387 Rutland
KCG388 Middlebury
KCG389 Manchester
KCG390 Rochester
KDL754 Mt. Killington repeter
KKL755 Mt. Snow repeater

** WISCONSIN **

Chequamegon National Forest
164.1250 Control & repeater input
164.8250 Repeater and simplex talkaround
168.1250 All channels' traffic repeated

Nicolet National Forest

168.1750 All F-1 and F-2 base & mobiles repeated on this link
164.9875 F-1 and F-2
166.5625 Iron Mountain, Michigan, Repeater out

164.1500 Northern Area control & repeater input
Eagle River KSB808 Florence KSB839
Long Lake KSB811 Three Lakes

164.1500 Southern Area control & repeater input
Lakewood KSB814

170.4250 Central control & input to Rat Lake repeater
Rhinelander KSD777 Laona KSB819
Blackwell KSB803

* * * * * * * * * * *

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Editor (IL-026)

INTERNATIONAL

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences, and any other information relating to monitoring in countries other than the United States and Canada. Send to:

Rickey Stein, 456 Barrymore Place, North Brunswick, NJ 08902

I am going to continue with the Republic of Ireland. Some of the information may be slightly dated as a number of changes have been made in various radio systems. As this information is relayed to me, I will present the changes here.

REPUBLIC OF IRELAND

Dublin County

Police:

The state police in the Republic of Ireland is the "Garda Siochana", literally- "Peace Guard" but usually translated as Civic Guard. Individual policemen are known as the "Garda" (translated "Guard"), plural "Gardai" (pronounced gardee). Officer grades are sargeant, inspector, superintendent, chief superintendent, assistant commissioner, deputy commissioner, and commissioner. The uniform is a navy trousers, jacket, greatcoat and flatop cap with the forces' badge, in silver, worn on the cap and also on a light blue patch on each side of the collar. A district letter and identity number is worn on each shoulder strap in the Dublin area. The shirt is light blue and during summer weather, the jacket is not worn but a navy patch covers the shoulder straps. Sargeants wear the same unifrm with their strips in cloth on

the upper arm. A metal sargeant's chevron is worn on the shirt shoulder strap in summer attire. The officer's uniform is grey-blue with rank markings and badge in gold thread.

The country is divided into two areas, Dublin Metropolitan and elsewhere. The area outside of Dublin is divided into seventeen divisions. Each division (under a Chief Superintendent) comprises one or more counties and is further subdivided into districts (under a Superintendent) and again into sub-districts consisting of a single station under a sargeant.

The Dublin Metropolitan Area (under an Assistant Commissioner) consists of the central and southern part of Dublin county (except for a small area in the west which is allocated to Carlow-Kildare division) and a small area of Wicklow County. It serves the city of Dublin and the Dun Laoghaire County Borough, together with the towns of Swords, Lucan, Clondalkin, Tallagh, Cabinteely, Shankill, Bray, Enniskerry and Greystones. It is subdivided into five divisions (under Chief Superintendents), subdivided into districts and sub-districts.

Radio operations in the Dublin Metropolitan Area consists of main dispatch on UHF repeaters duplex FM with the link to and from the vehicles being on lowband VHF AM simplex. In addition, each officer carries a highband VHF FM duplex walkie-talkie. One channel of this is dedicated for central dispatch or man-to-man, while the other frequencies are allocated as a district net.

Central dispatch identifies as 'Control'. District nets identify with a two letter callsign, the first letter of which is their district letter. Mobile use their district letter with one or two digit numbers as their call signs. Foot patrols are allocated a two digit number, which is used with their district letter, on an adhoc basis.

North-Central Division:

CA: Store Street CB: Fitzgibbon Street DA: Bridewell DB:Mountjoy

South-Central Division:

AB: Kevin Street AC: Kilmainham BA: Pearse Street BC: Harcourt Tce.
EA: Donnybrook EB: Irishtown

Northerb Division:

HA: Whitehall HB: Santry HC: Ballymun RA: Coolock RB: Malahide
RC: Swords JA: Raheny RB: Howth RC: Clontarf KA: Cabra
KB: Finglas KC: Blanchardstown

Southern Division:

GA: Crumlin GB: Sundrive LA: Ballyfermot LB: Lucan LC: Clondalkin
MA: Rathfarnham MB: Tallagh PA: Rathmines PB: Terenure

Eastern Division:

FA: Dun Laoghaire FB: Dalkey FC: Kill-O-Grange NA: Bray NB: Shankill
NC: Enniskerry ND: Greystones WA: Blackrock WB: Dundrum
WC: Cabinteely WD: Stepaside

Unit callsigns:

1/4/7/10 Uniform Cars 2/5/8/11 Detective units 3/6/9/12 Motorcycle patrols 15 Personnel carrier.

Units 1-3 are allocated to the A sub-district, units 4-6 are allocated to the B sub-district, 7-9 to the C sub-district and 10-12 to the D sub-district. E.g. H1 is a uniform patrol car in HA. G5 is a detective unit in GB, etc.

Other units:

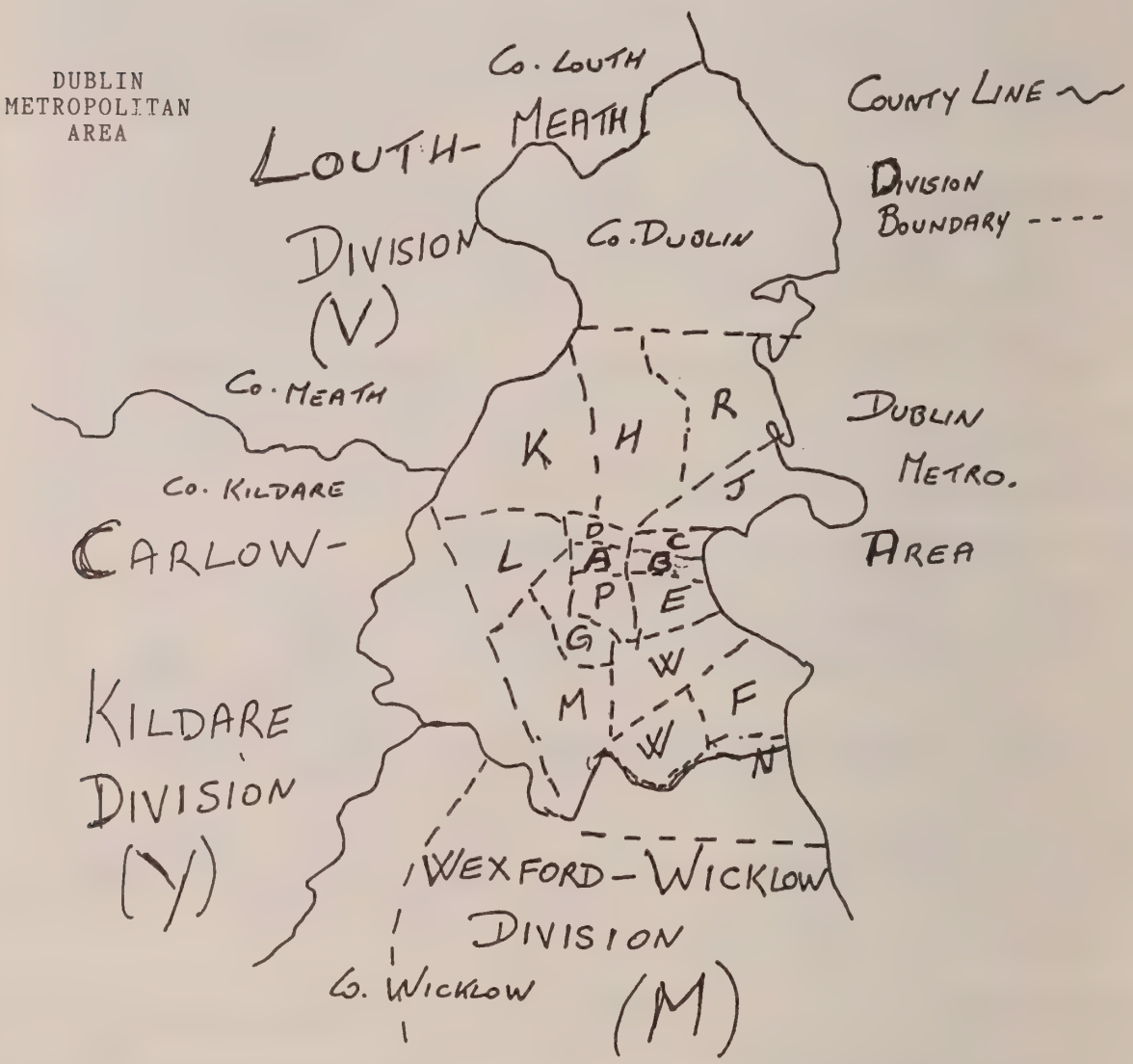
Oscar:Detective units including Drug Squad, Stolen Car Squad, Fraud Squad
Sierra: Special Detective Unit, Special Taks Force (armed units)
Tango:Traffic units
Victor: Special events control units

X-ray: Task force
Yankee: Drug Squad
Zulu: Technical bureau (fingerprints, etc.)

Special units:
"Red"- believed to be part of Sierra.
"Green", "Black" and various colour callsigns are heard from time to time and appear to be surveillance units.

Frequencies:
Central Dispatch:

Ch.	Base/Vehicle	Simplex	Notes
2	461.4000/467.9000		Sierra units
4	461.4500/467.9500		Tango units
1	461.4750/467.9750	84.02500	F-H/J-N/P/R/W units
5		84.12500	A-E units
9	169.1500/173.9500		Talkthrough on 169.1500



Motorcycle units for all districts dispatched on this channel. Other units operate this channel if problems with channels 1/5.

District nets:

c/s	Base/Unit	c/s	Base/Unit
A/B	168.9500/173.7500	C	168.9750/173.7250
D	169.0125/173.8125	E/P	169.0000/173.8000
F/W/N	169.0250/173.8250	M	169.0500/173.8500

THE ELECTRONICS COMMUNICATIONS PRIVACY ACT OF 1986 MAY AFFECT YOU

AND THE PENALTY MIGHT BE A FELONY CONVICTION

(One year and/or $10,000 for most offenses)

By John Coker (IL-010)

This Federal Bill (S-2575) is about to become the law of the land. It has already passed the House of Representatives and will probably be considered by the Senate before the end of August, PERHAPS BY THE END OF JULY!!!

This bill has dangerous provisions for radio hobbyists, amateur radio operators, computer users, and even average citizens. Unfortunately, this is a complicated bill, containing many provisions that not even the backers and 'writers' fully understand, because it has been modified so much.

You are encouraged to telephone your Congressman and Senators for a copy of this bill, and to READ IT YOURSELF; know what it says to PROTECT YOURSELF IF IT PASSES. If you have a Public Library available, compare this bill to the U.S. Criminal Code (title 18) that it modifies. It probably will first AMUSE you, then SCARE you that such an inconsistent, restrictive document is about to change your life. This bill is Senate Bill S-2575; the equivalently worded bill that already passed in the House of Representatives is HR-4952. A copy of either one will have the latest language. You should also obtain a copy of House Report 99-647; it is available free from your Congressman if sent for <u>now</u>.

These bills were completely rewritten on June 10, 1986, and few (if any) Congressmen and Senators have even READ them——much less understand them. The bills were written by staff people, influenced greatly by input from the cellular telephone lobby. The bill obviously reflects that input.

The bill would make quite a change in the legal view of radio waves. In the United States, since 1912, radio waves have been considered public property, regulated by government, but unprotectable because they cannot be directed to only the end recipient. They typically radiate in several directions, and users cannot be assured that the signals will not fall on other listners' ears. This new bill looks at many radio signals in a much more restrictive light. It attempts to legislate against interception of private radio signals. The approach is similar to telling a crowd to put on earmuffs so they won't hear the conversation of two people using megaphones.

In general, this bill says that most devices resembling traditional telephones (like mobile and cellular telephones) should get legal protection just as wire-line telephones always have. No matter that radio waves represent part of the system or that the sender sends his message out unencrypted over the public's radio spectrum. The backers of the bill instead say that "ANY 'telephone' conversation should be private; listeners should be punished."

Obviously this is a dangerous departure from the past toward use of the radio spectrum. Unfortunately, the good-intentioned legislators know virtually nothing about radio systems, etc., and have chosen to stay uninformed. They have rebuffed attempts to get the Federal Communications Commission to be allowed to testify on the technical feasibility of this bill. They have also ignored the Justice Department's view that enforcement would be very difficult, and that parts of the bill would probably not be enforced by the current Administration. That does not make the bill any less dangerous!! Don't expect a reversal, either! Radio manufacturers have dropped their opposition in the face of the better-financed cellular telephone lobby.

The bill leaves a lot of unanswered questions in addition to its new restrictions. For example, how long will the FCC be allowed to permit "General Coverage" and "All-Band" receivers? What new state laws will be passed now that the Federal Government has passed it first 'receiver' type of legislation? What will constitute evidence of a violation of the law—— will people report on neighbors who listen to "forbidden" channels in their homes? What's the next step when the cellular phone lobby complains that people are still listening to THEIR channels? There are a LOT of unasked and unanswered questions——see below for some additional specific problems relating to the radio portion of this bill.

WE ENCOURAGE YOU TO WRITE, CALL, OR TELEGRAPH
YOUR OWN SENATORS NOW!!!

THIS BILL MAY BE LITERALLY DAYS FROM BECOMING LAW. YOU MUST SPEAK UP NOW OR IT WILL BE TOO LATE. THERE IS ONLY ONE ORGANIZATION SUPPORTING THE RADIO HOBBYIST ON THIS SUBJECT (ASSOCIATION OF NORTH AMERICAN RADIO CLUBS); RADIO MANUFACTURERS AND GROUPS LIKE THE ARRL HAVE GIVEN IN TO THE CELLULAR LOBBY.

RCMA has provided a postcard you can send to your Senator--all you need to do is tear it out and put a 14¢ stamp on it. Copy it to send to key senators on the Senate Judiciary Committee. This card is provided to expedite your opinion. A personal letter would be better, but SPEED IS OF THE ESSENCE!!!

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From: _____

Address: _____

City/State/ZIP: _____

TO: SENATOR _____

UNITED STATES SENATE

WASHINGTON, DC 20510

224-5744

224-4124

Arlen Spector (R-PA)
SH-331 Hart Senate Office Building
224-4254

Paul Simon (D-IL)
SD-462 Dirksen Senate Office Building
224-2152

Members of the Senate

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Dear Senator Date_____

I have serious concerns about Senate Bill S-2575 and request that you personally read the bill before voting for it. I believe the bill is seriously flawed technically and should receive a full hearing in the Senate subcommittee or committee. This bill is so different from traditional regulations that full hearings must be held. It has only been in its present language since June 10. As a minimum, expert technical opinions should be solicited from the Federal Communications Commission about the present bill.

I personally object to the following other (checked) aspects of the bill:

____ Inconsistency; Example: cordless, cellular, and mobile phones are treated differently.

____ Bill unfairly favors cellular telephone industry at expense of general public.

____ Backers admit bill is unenforceable; why pass bad laws?; creates disregard for the system.

____ Communications Act of 1934 IS ENFORCEABLE (Sect. 705 regarding divulgence of information). Additional restrictions are unneeded.

____ Legislation does not cause radio waves to be private. Citizens will not have any more privacy after this legislation. Only real solution is for encryption devices to be added.

____ Bill still allows too much freedom for government to obtain "legal" wiretaps.

____ Bill allows access to computer data banks on individuals, without requiring notification of the person whose records are being obtained.

____ I SUPPORT THE AMENDMENTS TO S-2575 SUBMITTED BY ANARC (ASSN OF NO. AMERICAN RADIO CLUBS) AS BEING A MORE REASONABLE APPROACH TO THIS LEGISLATION.

---- _____

_____

neighbors who listen to "forbidden" channels in their homes! What's the next step when the cellular phone lobby complains that people are still listening to THEIR channels? There are a LOT of unasked and unanswered questions--see below for some additional specific problems relating to the radio portion of this bill.

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Senate Committee on the Judiciary

ıittee on Patents, Copyrights and Trademarks

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·. (D-DE) ıte Office Building	Edward M. Kennedy (D-MA) SR-113 Russell Senate Office Building 224-4543
ıs, Jr.* (R-MD) ıte Office Building	Robert C. Byrd (D-WV) SH-311 Hart Senate Office Building 224-3954
-UT) ıte Office Building	Howard M. Metzenbaum* (D-OH) SR-140 Russell Senate Office Building 224-2315
:-WY) ıte Office Building	Dennis DeConcini* (D-AZ) SH-328 Hart Senate Office Building 224-4521
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(R-AL) Office Building 224-5744	Howell T. Heflin (D-AL) SH-728 Hart Senate Office Building 224-4124
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* Member of Subcommittee on Patents, Copyrights and Trademarks

Strom Thurmond (R-SC), Chairman
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224-5225

Joseph R. Biden, Jr. (D-DE)
SR-489 Russell Senate Office Building
224-5042

Charles McC. Mathias, Jr.* (R-MD)
SR-387 Russell Senate Office Building
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Orrin G. Hatch* (R-UT)
SR-135 Russell Senate Office Building
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Alan K. Simpson* (R-WY)
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Charles E. Grassley (R-IA)
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Barry Goldwater (R-AZ).....SR-363 Russell 224-2235
Albert Gore, Jr. (D-TN).....SR-393 Russell 224-4944
Slade Gorton (R-WA).....SH-513 Hart 224-2621
Phil Gramm (R-TX).....SR-370 Russell 224-2934
Charles E. Grassley.....SH-135 Hart 224-3744
Tom Harkin (D-IA).....SH-317 Hart 224-3254
Gary Hart (D-CO).....SR-237 Russell 224-5852
Orrin G. Hatch (R-UT).....SR-135 Russell 224-5251
Mark O. Hatfield (R-OR).....SH-711 Hart 224-3753
Paula Hawkins (R-FL).....SH-313 Hart 224-3041
Chic Hecht (R-NV).....SH-302 Hart 224-6244
Howell T. Heflin (D-AL).....SH-728 Hart 224-4124
John Heinz (R-PA).....SR-277 Russell 224-6324
Jesse Helms (R-NC).....SD-403 Dirksen 224-6342
Ernest F. Hollings (D-SC).....SR-125 Russell 224-6121
Gordon J. Humphrey (R-NH).....SH-531 Hart 224-2841
Daniel K. Inouye (D-HI).....SH-722 Hart 224-3934
J. Bennett Johnston (D-LA)....SH-136 Hart 224-5824
Nancy Landon Kassebaum (R-KS).SR-302 Russell 224-4774
Robert W. Kasten, Jr. (R-WI)..SH-110 Hart 224-5323
Edward M. Kennedy (D-MA).....SR-113 Russell 224-4543
John F. Kerry (D-MA).....SR-362 Russell 224-2742
Frank R. Lautenberg (D-NJ)....SH-717 Hart 224-4744
Paul Laxalt (R-NV).....SR-323A Russell 224-3542
Patrick J. Leahy (D-VT).....SR-433 Russell 224-4242
Carl Levin (D-MI).....SR-459 Russell 224-6221
Russell B. Long (D-LA).....SR-225 Russell 224-4623
Richard G. Lugar (R-IN).....SH-306 Hart 224-4814
James A. McClure (R-ID).....SD-361 Dirksen 224-2752
Mitch McConnell (R-KY).....SR-120 Russell 224-2541
Charles Mathias, Jr. (R-MD)...SR-387 Russell 224-4654
Spark M. Matsunaga (D-HI).....SH-109 Hart 224-6361
Mack Mattingly (R-GA).....SH-320 Hart 224-3643
John Melcher (D-MT).....SH-730 Hart 224-2644
Howard M. Metzenbaum (D-OH)...SR-140 Russell 224-2315
George J. Mitchell (D-ME).....SR-176 Russell 224-5344
Daniel P. Moynihan (D-NY).....SR-464 Russell 224-4451
Frank H. Murkowski (R-AK).....SH-709 Hart 224-6665
Don Nickles (R-OK).....SH-713 Hart 224-5754
Sam Nunn (D-GA).....SD-303 Dirksen 224-3521
Bob Packwood (R-OR).....SR-259 Russell 224-5244
Claiborne Pell (D-RI).....SR-335 Russell 224-4642
Larry Pressler (R-SD).....SR-407A Russell 224-5842
William Proxmire (D-WI).....SD-530 Dirksen 224-5653
David Pryor (D-AR).....SR-264 Russell 224-2353
Dan Quayle (R-IN).....SH-524 Hart 224-5623
Donald W. Riegle, Jr. (D-MI)..SD-105 Dirksen 224-4822
John D. Rockefeller (D-WV)....SD-241 Dirksen 224-6472
William V. Roth, Jr. (R-DE)...SH-104 Hart 224-2441
Warren B. Rudman (R-NH).....SH-530 Hart 224-3324
Paul S. Sarbanes (D-MD).....SD-332 Dirksen 224-4524
Jim Sasser (D-TN).....SR-298 Russell 224-3344
Paul Simon (D-IL).....SD-462 Dirksen 224-2152
Alan K. Simpson (R-WY).....SD-261 Dirksen 224-3424
Arlen Specter (R-PA).....SH-331 Hart 224-4254
Robert T. Stafford (R-VT).....SH-133 Hart 224-5141
John C. Stennis (D-MS).....SR-205 Russell 224-6253
Ted Stevens (R-AK).....SH-522 Hart 224-3004
Steven D. Symms (R-ID).....SH-509 Hart 224-6142
Strom Thurmond (R-SC).....SR-218 Russell 224-5972
Paul Trible (R-VA).....SH-517 Hart 224-4024
Malcom Wallop (R-WY).....SR-206 Russell 224-6441
John W. Warner (R-VA).....SR-421 Russell 224-2023
Lowell P. Weicker, Jr. (R-CT).SH-303 Hart 224-4041
Pete Wilson (R-CA).....SH-720 Hart 224-3841
Edward Zorinsky (D-NB).....SR-443 Russell 224-6551

G/L	169.0750/173.8750	H/K	169.1000/173.9000
J/R	169.1250/173.9250		

Ireland: to be continued...

••••••••

Gary Sturm, one of our Railroad Editors has asked for your help finding the radio frequencies for British Railways.

The British Railways Board who operates British Rail in England has given out some vague, but rather important information on the frequency bands they use for railway communications. I have listed that data below, and with your help and the search functions of your scanners, we most likely be able to find the frequencies they use. Putting this together with other corrensponded, we can attempt to establish what the actual radio communication channels and uses are. Here is what is known:

UHF Frequency Band Usage:
Two channels are used for stations and Marshalling yards. These two channels lie between 453 and 460 MHz. Two exact frequencies to monitor are 453.5500 and 453.7750. Let's see if they are in use.

VHF Frequency Band Usage:
Twelve channels are provided for national coverage of main line communications to Locomotives and in-cab signalling. These channels have just been moved to two separate bands. The first band is 196-198MHz and the other 204-206MHz. Various frequencies will be in use in different locations on the British Railway lines. Monitors on the various mainline and secondary lines of British Railways will need to assist in seeking out these frequencies.

Please send all information that can be found.

Well that's all for this month. ••••••••

MARKETPLACE

Gary M. Darcy, Editor

Members may advertise, free of charge, items wanted, items for sale, items for trade that are associated with the hobby of monitor/utility radio listening. No dealer ads will be accepted for this column. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads printed in this column. Send to:
RCMA MARKETPLACE, c/o Gary M. Darcy, P.O. Box 1329, Palmdale, CA 93550

Please be sure to include your membership number.

All Marketplace ads will be accepted ONLY on special forms available from this column's editor. Send a self-addressed STAMPED envelope (business size) to the address above to receive a supply of forms. Foreign members do not need to include postage on envelopes they send.

Members wishing to contact me by way of electronic mail may do so via the following services:

COMPUSERVE..76566,1542	THE SOURCE.....BDW292
MCI MAIL.....286-1087	
DELPHI:.....GMDARCY	PEOPLE LINK.....INF568
TELEX.....6502861087	

FOR SALE OR TRADE: [3 ITEMS]
[#1]: Radio Shack PRO-25. 8 channel hand-held crystal scanner; covers VHF hi/lo, UHF, and aircraft bands; with all original accessories, instructions, and box. $60.00. [#2]: Radio Shack PRO-5. 4 channel UHF crystal hand-held scanner with all original accessories and instruction booklet. $40.00. [#3]: Radio Shack PRO-4. 4 channel crystal hand-held VHF scanner; with all original accessories and instruction booklet. $40.00. [WILL SELL ALL THREE TOGETHER FOR $125.00.] Contact: RON KOSINSKI (IL-310), 3823 W. 76th St., Chicago, IL 60652.

WANTED: [2 ITEMS]
[#1]: Rockwell-Collins AN/ARC-182 multi-band transceiver. [#2]: Yaesu FRG-9600. Contact: DAN RAMOS (CA-OR-275), 319 - 8th St., Huntington Beach, CA 92648.

FOR SALE: [2 ITEMS]
[#1]: 1 VHF-Lo plug-in R.F. board for Bearcat BC-III scanner. $10.00. Price includes shipping. [#2]: Scanner crystals. Bearcat and Regency/Realistic types. $2.00 each/$8.00 for all. Send SASE for list of frequencies. Contact: DAVID W. PHEBUS (IN-051), 107 E. Madison St. #3, Goshen, IN 46526.

FOR SALE: [2 ITEMS]
[#1]: MacDonald CE-110. 16 channel, AC/DC, covers 148-174 Mhz and 450-470 Mhz. Uses Regency type 10.7 I.F. crystals. $50.00. [#2]: Regency type crystals (10.7 I.F.). $2.25 each. Send SASE for my new list. Contact: TOM HEIDERER (WI-006), 3888 S. Hanson Ave., Milwaukee, WI 53207 or phone 414-481-7760.

FOR SALE: [1 ITEM]
Regency MX-3000. Very good condition; unit has a 156.8 Mhz birdie. $210.00. Contact: JACK VENEZIA (CA-LA-332), 334 W. Windsor-19, Glendale, CA 91204 or phone 818-243-6316.

FOR SALE: [3 ITEMS]
[#1]: Bearcat BC-260. Excellent condition. $165.00. [#2]: Bearcat BC-220RC. Canadian version; 138-170 Mhz/406-490 Mhz/Aircraft 118-136 Mhz. $175.00. [#3]: Bearcat BC-300. Excellent condition. $150.00. Contact: BOB COBURN (NH-003), 4 Tinkham Ln., Londonderry, NH 03053 or phone 603-432-2615.

FOR SALE: [1 ITEM]
Fanon-Courier SCMA-6. Power output jack (from SCMA-6 to hand-held unit) is in need of repair. $10.00. Contact: LOUIS CAMPAGNA (PA-024), 7221 Rising Sun Ave., Suite 199, Philadelphia, PA 19111.

FOR SALE: [3 ITEMS]
[#1]: Regency HX-1000 w/Motorola carrying case & remote speaker. $175.00. [#2]: Bearcat BC-140 10 channel programmable; AC only. $45.00. [#3]: Realistic DX-100 shortwave receiver. $40.00. Contact: RICHARD AVERY (CA-AL-020), 2672 - 108 Ave., Oakland, CA 94605.

FOR SALE: [2 ITEMS]
[#1]: Motorola A03CAC2468. 2 Motorola PBII-CAC tone-only pagers; high band; with chargers and spare batteries; excellent condition. $35.00 each. [#2]: Motorola A03EAC2468. 2 Motorola PageCom tone/voice pagers; high band; with chargers and spare batteries; excellent condition. $35.00 each. Contact: CURTIS HARBIN (TN-033), Rt. 15 Box 326, Cox Apt. #2, Grassy Valley Rd., Gray, TN 37615 or phone 615-282-3192.

FOR SALE: [1 ITEM]
''Parting out'' FCC transmitter state index, dated 1/16/86. AR, HI, IL, LA, MD, MN, NC, NJ, PR, and VA. $2.00 each. CA, FL, NY, and TX (thru W). $4.00 each. Send post card to confirm. If no reply, fiche is sold. Contact: GEORGE DUBOIS (OR-001), 10048 N.E. Campaign, Portland, OR 97220-3534.

MONITORING & THE LAW

Send all articles on, references to, and copies of monitoring laws, as well as questions concerning the legal aspects of monitor radio listening to:

COLUMN EDITOR WANTED

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

Robert Horvitz
Government Affairs Liaison

1634 15th Street, NW
Washington, D.C. 20009

FOR IMMEDIATE RELEASE
23 June 1986

Contact: Robert Horvitz
(202) 232-3677

House Passes Electronic Communications Privacy Act

Washington, DC (23 June 1986)---In a brief and sparsely attended session today, the US House of Representatives, by voice vote, passed H.R. 4952, the Electronic Communications Privacy Act of 1986. There was no debate, and no amendments were offered from the floor.

The bill had been favorably reported out of the House Judiciary Committee on 10 June, on a vote of 34-0. The Subcommittee on Courts, Civil Liberties, and the Adminsitration of Justice, chaired by Rep. Robert W. Kastenmeier, developed H.R.4952.

Senator Patrick Leahy has introduced an identically-worded bill, S.2575, for consideration by the Subcommittee on Patents, Copyrights and Trademarks. A Subcommittee aide "expects it to move pretty quickly", with a mark-up session likely sometime after July 14th, following Congress' holiday recess.

The Association of North American Radio Clubs opposes the radio provisions of the bill. By absorbing radio into the larger legal category of "electronic communications", and making it illegal to "intercept" electronic communications except for the types specified in H.R. 4952, the bill would overturn a fundamental assumption that has governed radio reception since the first radio law was passed in 1912: that is, if someone can receive a signal in their home, they may do so. The Electronic Communications Privacy Act would make it a crime to detect some of the signals passing through our very bodies, by declaring them to be not "readily accessible to the general public", even though they in fact are readily accessible.

The Justice Department has indicated that enforcement of the radio provisions of the bill would be virtually impossible, except in cases of egregious violations. The Federal Communications Commission (which was not invited to testify on the House Bill) has suggested that the Communications Act of 1934, which permits reception but not divulgence or beneficial use, is an appropriate standard for the protection of communications when the method of transmission itself makes the communication available to anyone within range.

Also vigorously opposed to the bill is the Communications Security Association, which says it is "ludicrous" to think that an unenforceable law can have any deterrent effect.

E N D

NEW PRODUCT REVIEW

This column is for reports on new products of interest to scanner listeners. Send reports on scanners, antennas, frequency publications and other products related to the hobby to:

James A. Abdu (GA-058), 1203 N. Crossing Way, Decatur, GA 30033

Hello and welcome to the New Product Review column. This month I have a few things to report on including Railfone inc., radio test gear, and more on Regency scanners.

To start with Airfone inc. and it's Railfone subsidiary are putting out bids to install mobile telephones in aircrafts and trains. Airfone has offered in-flight telephone service since October 1984 and currently has service in over 300 planes operated by 15 domestic airlines. Each plane has between two and four phones and demand has been heavy so far. Airfone is planning to test a 'seat phone' which would be installed at every first class seat on an airliner.

The Airphone system operates with huge cells about 400 miles in diameter which contain the equipment for switching and transmission of calls. I recall seeing frequencies published for this system but could not locate that information for the column. I believe it operates between 460 - 470MHz but am not sure.

Railfone has recently began providing telephone service on all Amtrak Metroliner trains running between New York and Washington, D.C. Calls are billed at $5 for the first three minutes and $1 for each additional minute. A 90-day trial is planned in the metropolitan Chicago area by Northeast Illinois Railroad Courier for commuter trains this summer.

Each train will have three Railfone telephones: one in the dinette car, club car and a coach car. Radio equipment is kept on the trains and the system interconnects with cellular telephone systems throught the country which pass calls to the regular telephone network. I am sure frequency information will be available as members gather it and send it to the proper columns.

For test equipment, Marconi Instruments (3 Pearl Ct., Allendale, N.J., 07401) has a new unit on the market with some unique features. The Model 2955 Mobile Radio Teast Set makes testing full duplex multi-channel or scanning type transceivers easier. The unit has a RX-TX FREQ key which when activated sets the RF generator frequency to the frequency of the transmitter under test. This eliminates the necessity of entering each frequency from the keyboard. With some scanning transceivers capable of hundreds of frequencies this feature could certainly be a big time saver.

Concerning Regency scanners a new hand-held is now being offered. It is the Regency HX-1500 and seems to be an impresive unit with some handy (no pun intended) features. First off this scanner covers 29 - 54MHz, 118 - 174MHz, 406 - 420MHz and 440 - 512MHZ. This unit has 55 channels and is the first hand held scanner to use channel banks. There are four banks of 11 channels each which can be switched in or out with one button.

Standard features such as two scan speeds, priority channel, scan delay, search, direct channel access, channel lockout and entry conformation beeps are incorporated as is EAROM memory and a top mounted auxiliary scan control button. The unit has a list price of $369.95 which includes belt clip, earphone and flexible antenna. A drop in or wall mount charger and carrying case are available as options.

I am expecting a trial unit to test out to provide a more detailed review of this unit and will cover it again in a future column.

With regards to other regency scanners I have modified my MX-7000 with the speed modification again. This time I disabled the keyboard lockout switch and re-wired it to switch the speed modification in and out. Although the memory in my unit will last overnight with the modification I switch it out of the circut when not in use to conserve battery wear and insure retention of memory over long periods with the power disconnected. Units that only retain memory

for a few minutes could avoid that problem with the modification on the switch. With this set-up the unit also has four scan/search speeds.

I have provided Steve Kayworth with details of this modification for inclusion in the Technical Topics column. Any member who would like more info can contact me directly if they desire.

The address for the Pesonal Radio Steering Group which was mentioned in past columns is: P.O. box 2851, Ann Arbor, Michigan, 48106, (313) 769-1616. Their monthly newsletter, the Personal Radio Exchange, contains useful information on the F.C.C., scanner legislation and other items of interest.

That's all for this month, take care and enjoy!!!

JIM ABDU

NEWS MEDIA COMMUNICATIONS

This column is for reporting frequency and radio systems information of news media. Send related reports and questions on newspaper, radio, television, magazine, film production companies, etc. to:

Allen G. Henney, MD-069, 6912 Prince Georges Ave, Takoma Park, MD 20912

FIRST THIS MONTH WE HAVE A LOOK AT THE SOUTH WITH THE HELP OF JIM ABDU, THE RCMA NEW PRODUCT REVIEW EDITOR FROM DECATUR, GEORGIA & BRAD CARPENTER OF FORT WORTH, TEXAS. FIRST, LETS LOOK AT WHAT JIM SENT US FOR THE ATLANTA AREA, JIM NOTES THAT THE BELOW FREQUENCIES HAVE BEEN MONITORED BY HIM & CHECKED WITH FCC MICRO-FICHE.

ATLANTA, GEORGIA AREA NEWS MEDIA

METRO TRAFFIC CONTROL	450.3875	METRO AIRBORNE FEEDS
STORER (OR COX)	450.1125	
WAGA (TV 5) CBS (STORER)	450.4500	
WPLO (590 AM)	450.0875	RADIO & NEWS REPORTS
WSB (TV 2) ABC (COX)	450.2500	WSB SKY COPTER
WSB (TV 2) ABC (COX)	450.4875	
WSB (TV 2) ABC (COX)	450.5500	
WXIA (TV 11) NBC (GANNETT)	450.1500	
WXIA (TV 11) NBC (GANNETT)	450.6125	

NEXT, HERE'S THE FREQUENCIES BRAD SENT US FROM FORT WORTH, TEXAS.

FORT WORTH - DALLAS, TEXAS AREA NEWS MEDIA

FORT WORTH STAR TELEGRAM	173.2750	KQA964 (CIRCULATION)
FORT WORTH STAR TELEGRAM	173.3250	KQA964 (CIRCULATION)
KAAM (1310 AM) & KAFM (92.5 FM)	161.6400	KEL952
KDFW (TV 4)	166.2500	KDW886 REPORTERS, SKY 4, 5/6 PM CUES
KDFW (TV 4)	450.3125	ENGINEERING
KEGL (97.1 FM)	450.5875	WHE801 ANDREA LIVELY IN BLACKTHUNDER
KLIF (1190 AM)	450.7500	TRAFFIC
KPLX (99.5 FM)	450.7500	BOB KING TRAFFIC
KRLD (1080 AM)	450.1500	KUF558-559 RON BARR TRAFFIC
		LICENSED TO METRO-MEDIA BROADCASTING
KRQX (AM) & KZEW (97.9 FM)	450.7000	KKI435 PAM NOLAN TRAFFIC
		LICENSED TO A. H. BELO WHO ALSO OWNS WFAA
KVIL (1150 AM & 103.7 FM)	450.4125	JONATHAN HAYES TRAFFIC
KXAS (TV 5)	170.1500	ENGINEERING
KXAS (TV 5)	450.2125	REMOTES & NEWS CUES
KZEW SEE KRQX		
METRO TRAFFIC CONTROL	450.4875	(USED BY MOST RADIO STATIONS)
WBAP (820 AM) CAPITAL CITIES STATION	450.6125	KAJ870 USED BY
		DICK SIEGEL IN JET COPTER 820 & STICKER SPOTTER VAN
WFAA (TV 8)	161.7000	CH.2 ENGINEERING
WFAA (TV 8)	450.0875	KAL920 CH.1 REPORTERS

MANY THANKS GO TO BOTH JIM ABDU & BRAD CARPENTER FOR SHARING THEIR VALUABLE INFORMATION. FINALLY, WE HAVE ANOTHER LOOK AT THE

NEW YORK STATE NEWS MEDIA WITH THE HELP OF 3 NEW YORK STATE MEMBERS: DAVID DALLESSANDRO, FRED MONA & JAMES OTIS. FIRST WE WILL LOOK AT THE LISTS DAVID DALLESSANDRO & FRED MONA SENT FOR THE BUFFALO AREA. NOTE, ALL FREQUENCIES ARE FROM FRED'S LIST, EXCEPT THOSE MARKED WITH AN '*' WHICH MEANS VERIFIED BY BOTH FRED AND DAVID.

BUFFALO AREA NEWS MEDIA

BUFFALO EVENING NEWS	173.3250	KEI405	REPORTERS
BUFFALO EVENING NEWS	453.0000	KNIP809	CIRCULATION
WBEN (930 AM & 102.5 FM) *	450.0500		REMOTE BROADCASTS & TRAFFIC COPTER UPLINK & DOWNLINK
WEBR (970 AM)	161.6400		WEBR RADIO NEWS
WGR (550 AM)	450.7000		F-1 REMOTE BROADCASTS & HELICOPTER TRAFFIC DOWNLINK
WGR (550 AM)	450.8500		F-2 REMOTE BROADCASTS (DOWNLINKS ALSO HEARD AT +5 MHZ)
WGR (550 AM)	455.2500	WHE805	REMOTE BROADCASTS, UPLINK & CUES
WGRZ (TV 2) *	161.7000	KEK315	NEWS
WGRZ (TV 2)	455.4500	KQB679	ENGINEERING & LIVE SHOTS
WIVB (TV 4) *	455.6500	KJG593	NEWS
WKBW (TV 7)	151.7575	KNDQ561	NEWS (REPEATER INPUT 157.7525)
NOTE THAT THE ABOVE IS AMPLITUDE COMPANDORED SIDEBAND!			
WKBW (TV 7) *	161.7600	KEK393	NEWS (OLD CHANNEL USED OCCASIONALLY BY HANDHELDS.)
WKBW (TV 7)	462.0750	KLL761	ENGINEERING & LIVE SHOTS (THE ABOVE IS SELDOM USED)

FINALLY, HERE IS THE LIST THAT JAMES OTIS SENT US.

SYRACUSE AREA NEWS MEDIA

HERALD JOURNAL NEWSPAPER	152.1200	PHOTOGRAPHERS, 1-WAY PAGING
HERALD JOURNAL NEWSPAPER	173.2750	
MOBILE PHOTOGRAPHY SERVICE	173.3750	
SYRACUSE UNIVERSITY	450.9250	
WCNY (TV 24)	161.7000	2-WAY
WHEN (620 AM)	170.1500	AIR TRAFFIC PLANE
WIXT (TV 9)	450.0500	NEWSROOM TO REPORTERS
WNDR (1260 AM) & WNTQ (93.1 FM)	161.6700	2-WAY
WSTM (TV 3)	450.3500	NEWSROOM TO REPORTERS
WSYR (570 AM)	450.5500	AIR TRAFFIC HELICOPTER
WTVH (TV 5)	450.2500	NEWSROOM TO REPORTERS
WTVH (TV 5)	450.4500	ENGINEERING BROADCASTING STAFF

WATERTOWN, NEW YORK AREA NEWS MEDIA

TIMES NEWSPAPER	463.7500
WAPE (TV 16)	487.7500
WTNY (790 AM)	161.6700
WWNY (TV 7)	161.6700

JAMES NOTES THAT THOSE 450 FREQUENCIES THAT HAVE REPEATERS, HAVE INPUTS 5 MHZ HIGHER. WELL, THAT IS ABOUT IT FOR THIS MONTH.

ROBERT HORVITZ REMINDS US THAT FOR THOSE WHO WERE NOT AWARE OF IT; H.R. 3378 (THE BILL REGARDING COMMUNICATIONS IN CONGRESS) PROHIBITS THE MONITORING OF NEWS MEDIA COMMUNICATIONS. I HOPE IT CAN BE STOPPED BEFORE IT IS TOO LATE. BY WRITING A REPRESENTATIVE IS ONE OF THE THINGS WE ALL CAN DO TO HELP.

UNTIL NEXT MONTH GOOD NEWS & GOOD SCANNERING!

Alan

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest. Photographs must be 3 X 5 inches or larger, black-and-white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE. Send photos or write to:

Hugh Stegman, 11622 Exposition Blvd., #2, Los Angeles, CA 90064

NO COLUMN THIS MONTH

However, we are not entirely without photos this month—see the Public Safety - South East column.

PUBLIC SAFETY

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for poilice, sheriff, fire, forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway & street maintenance, port authority/bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional Public Safety editor listed below.

Associated Public-Safety Communications Officers, Inc.

OFFICIAL TEN SIGNAL LIST

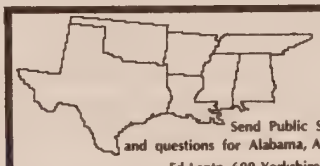
APCO states the numbering, sequence, words or word phrasing of the below listed signals may no be altered, nor may the reserved signals be otherwise implemented except by APCO. Any user may employ signal numbers upward, beginning with 10-40, as needed for local dispatching. RCMA publishes this listing in support of APCO and their uniform dispatch code efforts. We will print other dispatch codes, different from the OFFICIAL APCO listing, only to assist our membership in their continued monitoring hobby. It is hoped you find this listing useful.

10-1	Signal weak	10-19	(In) contact
10-2	Signal good	10-20	Location
10-3	Stop transmitting	10-21	Call ( ) by phone
10-4	Affirmative (OK)	10-22	Disregard
10-5	Relay (to)	10-23	Arrived at scene
10-6	Busy	10-24	Assignment completed
10-7	Out of service	10-25	Report to (Meet)
10-8	In service	10-26	Estimated time of arrival
10-9	Say again	10-27	License/Permit Information
10-10	Negative	10-28	Ownership Information
10-11	( ) on duty	10-29	Records check
10-12	Stand by (stop)	10-30	Danger/Caution
10-13	Existing conditions	10-31	Pick up
10-14	Message/Information	10-32	( ) units needed (Specify)
10-15	Message delivered	10-33	Help me quick
10-16	Reply to message	10-34	Time
10-17	Enroute	10-35 through 10-39 are reserved for future assignment by APCO. User option 10-40 upward.	
10-18	Urgent		

PUBLIC SAFETY—CALIFORNIA

P.O. Box 3962 Santa Fe Springs, California 90670-1962

NO COLUMN THIS MONTH



PUBLIC SAFETY — SOUTH CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Alabama, Arkansas, Louisiana, Mississippi, Tennessee, Oklahoma, and Texas to Ed Lentz, 609 Yorkshire, Pasadena, TX 77503-1450

GEnie - ELENTZ DELPHI - THISARSE COMPUSERVE - 72645,172

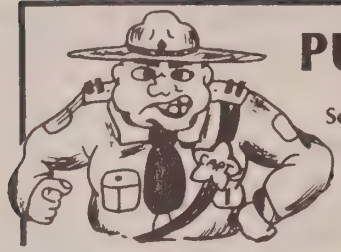
NO COLUMN THIS MONTH

NO COLUMN THIS MONTH

PUBLIC SAFETY — NORTH CENTRAL:

Send Public Safety and Special Emergency frequencies, radio system details and questions as follows — Iowa, Kansas, Missouri, Nebraska, N. Dakota, S.Dakota, and Minnesota:

Kurt Swaney, P.O. Box 1198, Manhatten Beach, CA 90266-8198



PUBLIC SAFETY — SOUTH EAST:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows — Florida, Georgia, N. Carolina, S. Carolina, W. Virginia and Virginia:

Jorge L. Rodriguez, 1129 Castile, Coral Gables, FL 33134

AIR RESCUE ONE
SOUTH FLORIDA'S VITAL LINK IN ITS TRAUMA NETWORK

"Squad 31, Engine 9, AIR RESCUE ONE;" the voice on the speaker squawked, interspersed with the appropriate alert tones."Respond to a three seventeen (317;Vehicle Accident with serious injuries) 5 miles west of Krome on Tamiami Trial."

Within seconds the sound of the twin turbine Bell 412 helicopter was heard whining at full power. The squad at Air Rescue One, Dade County's regional support helicopter to South Florida Trauma Centers was in action. Here, where seconds can mean life or death, there is no time to lose. "You have one hour to get the patient to the hospital" says Chief Smith of Metro-Dade Fire Rescue, that's the "Golden Hour" you work to stay within.

There's no time to lose and with the usual moderate to heavy air traffic at Tamiami Airport in South Dade that means a priority departure. No, "Tamiami Tower this is N911AR ready for takeoff." That just wont do when people's lives are at stake. Here, standard operating procedure goes something like this: "Tamiami Tower Air Rescue One - Departing." In most cases such a call isn't even necessary since the helipad is at the base of the tower and the controllers are always alert to the activity around N911AR as its crew climbs aboard and powers up.

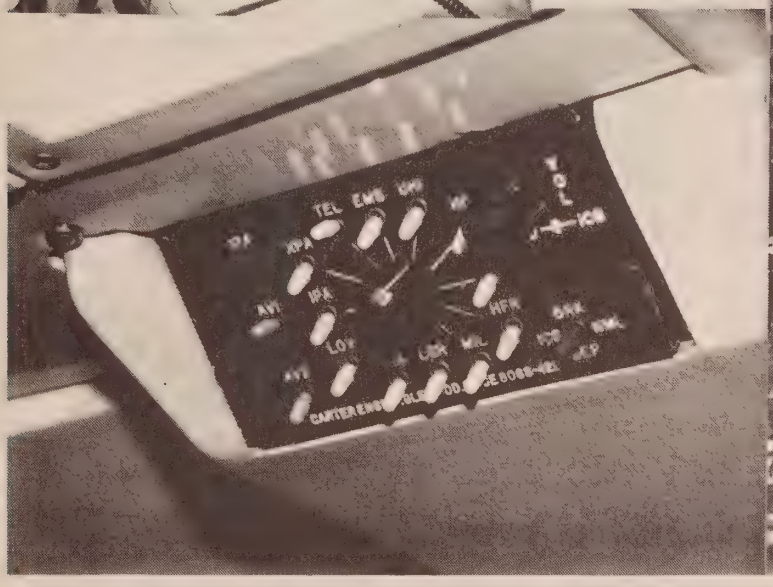
Once airborne, it's as the crow flies and with the knowledge that these pilots have of the area, that's exactly the way this ship flies. On this particular mission the team was responding to an overturned van about one quarter of the way between Miami and Naples on state road 90. That highway, all eighty miles of it cuts across the state through a wilderness better known as the Florida Everglades. Once in the air everyone is busy, the adrenaline flowing. While up front the pilot and co-pilot are fully occupied with the flying and navigation, in the back the flight medic is preparing for whatever emergency they're about to encounter. Already wearing surgical gloves, the medic checks his equipment and prepares.

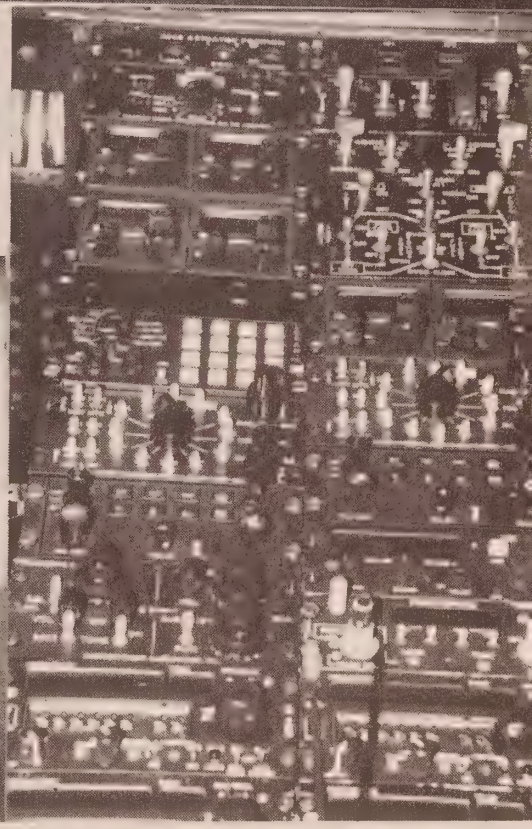
In this case, Air Rescue One is first on the scene. Quickly, by sight, by radio, and sometimes even by hand signals, the crew learns of the seriousness of the situation. Several minutes later the ground crews arrive. This time the driver was lucky; he's not seriously injured (Although it's hard to believe when you view the wreckage.) On the third orbit around the scene, Air Rescue One sets down in a field a few hundred feet from the scene of the accident. After verifying that they will not be needed to treat and transport the injured, the craft is once again airborne and heading home.

The Aircraft

Built around the Bell 412 medium lift helicopter, Air Rescue One is quite a ship. With a four bladed rotor system the aircraft is designed to cruise at 130 knots or almost 150 miles per hour. The craft is powered by two Pratt & Whitney PT6T-3B engines and with standard fuel tanks it has a range of 245 nautical miles.

Up front the panel resembles something out of Star Wars more than anything else. This is primarily due to the effect of the





Top Left: View of center console with its eleven plus radios and pilots station,With Motorola Cellular at bottom left.

Top Right: Air Rescue One;N911AR sits quietly on it's pad at Tamiami Airport in South Dade. Auxiliary power connected and ready for immediate departure.

Bottom Left: One of the custom radio control panels. This one allows the flight medic to use any radio to communicate with the hospital or others on the ground.

Bottom Right: Close-up of radio complement.Starting at the top left: dual NAV's,dual COM's,Loran-C,Co-pilot control panel,EFIS controls,dual purpose UHF and 800 MHz control,VHF-HI, and barely visible UHF-1(identical to radio just above);continuing up the right side again barely visible the UHF-2, above it an identical looking VHF-LOW,followed by a UHF-AM Military radio and a King HF radio. Then as on the left, here is the pilots EFIS controls and above that his custom radio control panel. Above these an ADF and Transponder complete the console.

Electronic Flight Instrumentation System (EFIS) which makes that portion of the panel look something like a video game display. The panel is outfitted with every flight instrument which might be necessary for safe and efficient flight. But what is most impressive aboard this aircraft is the center console between pilot and copilot, for there one finds a complement of radios that resemble a military aircraft more than a county fire rescue vehicle.

Starting with the ordinary, the helicopter has dual digital **Aircraft Communication** radios (COM) and dual **Aircraft Navigation** radios (NAV) in addition to the aircraft's **Automatic Direction Finder** and **Transponder.** But that's where ordinary ends and extraordinary begins. Beyond this there are two rows of units which give Air Rescue One the ability to talk to nearly anyone.

Beginning just below the NAV radios there is a **Loran-C** capable of guiding the aircraft to within 50 feet of any point in the U.S. by latitude and longitude. Following that are two custom built **Control Panels** that permit any of the eleven transceivers to be switched to a headset. These are followed by controls for the **EFIS** which vary intensity of the screens or permit the copying of one screen to the other in case one of the screen generators goes out. This is followed on the left with a second custom control panel which operates two radios:one a **UHF** radio for those fire departments above 470.000 Mhz. and the other a radio for the City of Miami's new 800.000 Mhz. system. Then to the right of this control head one finds a Collins **UHF-AM Military Aircraft** radio and above this is a **KING High Frequency (HF)** radio. The last four radios are 4000 channel Wulfsberg radios which cover (clockwise) **VHF-HI** 150.000 to 170.000 Mhz.;**VHF-LOW** 30.000 to 50.000 Mhz.;and two **UHF** radios for 450.000 to 470.000 Mhz. Finally to top it all off a **Cellular telephone** is located just left of the console by the co-pilots right side.

The Operations

Metro-Dade Fire Rescue, including Air Rescue One are dispatched through the county's 911 Emergency Communications System in South Miami, using one of three - soon to be four frequencies. They are:

F1	North	453.525
F2	Central	453.700
F3	South	453.800
F4	Tactical	453.600
New	Active Dec.86	453.825

PUBLIC SAFETY — NORTH EAST:

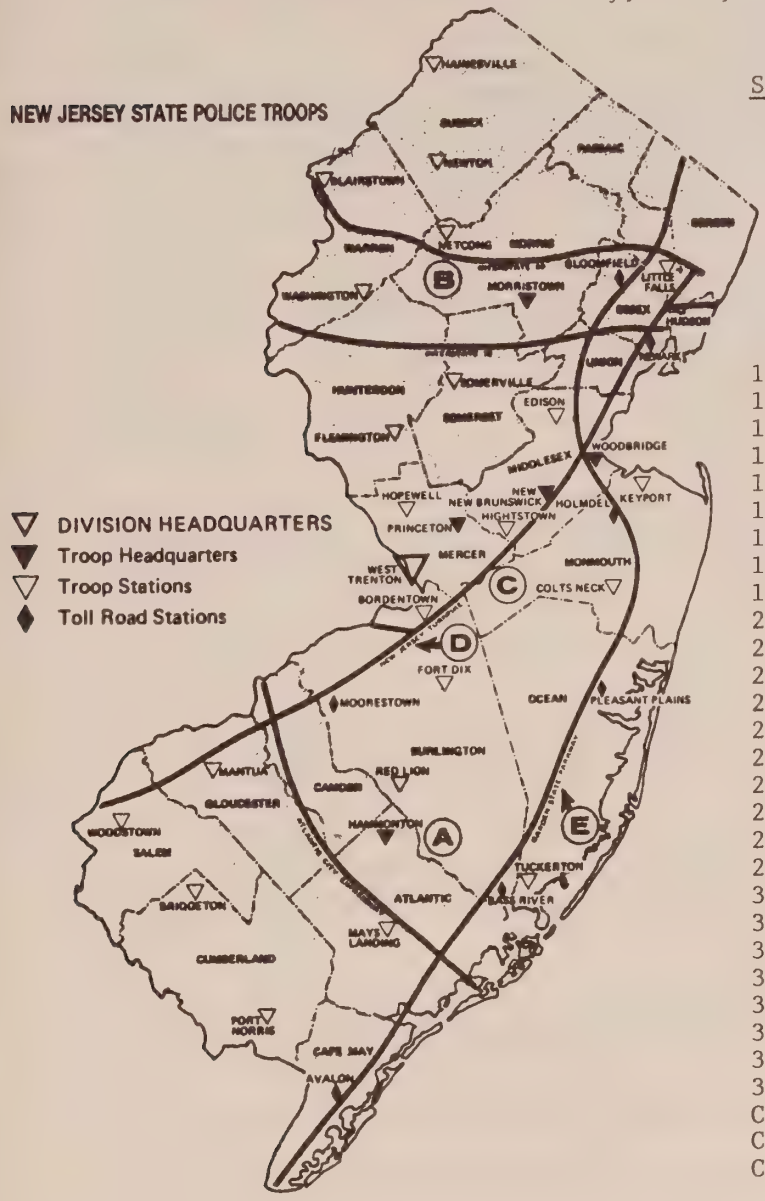
Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows — New England states, New York, Pennsylvania, New Jersey, Maryland, Delaware, and District of Columbia:
Hank Rose, #6 Florham Drive, Lawrenceville, NJ 08648

Welcome once again to the PSNE column. A sincere "thanks" goes out to all the members (and, oddly enough, some "soon-to-be" members..) who have sent in material and questions with regard to the column. This is what makes it work, guys and gals.

I am going to devote the majority of this month's column to updating info with regard to the State of New Jersey-Division of State Police. As most of you are probably aware, The New Jersey State Police are in a transitional period between utilization of their current system and implementation of a state-of-the art 800 MHz system. The 800 MHz system will be discussed in detail later in the article.

The system currently in use by the New Jersey State Police is basically the same system which has been in use for the past twenty-five years or so. At face value, it would appear to be a rather simple system comprised of low-band, high-band and some VHF frequencies. As we shall see, the system is rather complex. As a matter of information, your editor has been monitoring this agency for a long, long time...perhaps starting this endeavor somewhere

concurrent with the beginning of the Ice Age and has personally developed the following information. If I offend any other editors or publishers of frequency directories, etc. I appologize for same, as there will obviously be some reference made to information contained in their respective publications. I would like to take this chance to thank Richard Prelinger and Daria Malinchak, editor and associate editor of MONITOR AMERICA for permisssion to use their map of the New Jersey State Police stations. For those of you who do not have a copy of this fine publication, I can only stress that it is a most worthwhile investment. Okay, folks, here goes.....



State Police Radio Signals

1 Emergency - stand by
2 Holdup and robbery
3 Murder
4 Aggravated assault and battery
5 Breaking, entering and larceny
6 Escape
7 Drunk or disorderly
8 Domestic dispute
9 Prowler/suspicious person
10 Burglar or bank alarm
11 Motor vehicle accident
12 Hit-and-run accident
13 Aid to motorist
14 Drunken driver
15 Motor vehicle lookup
16 NCIC check
17 Suspicious car
18 Stolen car
20 Change location
21 Radio check
22 Out of service
23 In service
24 Continuing investigation
25 Detail completed
26 Meet person
27 Trooper needs help
28 Location
29 Call by telephone
30 Return to barracks
31 Emergency at barracks
32 Escort
33 Attempt to locate
34 Bomb threat
35 Explosion
36 Sniper
37 Discontinue post
Code 1 Use extreme caution - danger
Code 2 Expedite - serious nature
Code 3 Routine matter

DIVISION OF STATE POLICE

There are five State Police Troops; "A", "B", "C", "D", and "E" which have responsibility for the non-incorporated areas of the State, The New Jersey Turnpike. Atlantic City Expressway, Garden State Parkway,performing functions for the Casino Control Commission, and as of last year taking over control of the Marine Police(formerly a division of the Department of Environmental Protection.) Additionally, the Division Headquarters is located in West Trenton and the Training Division (State Police Academy)has recently been relocated from Sea Girt to the massive United States Army facility at Fort Dix. There are two State Police laboratories. Little Falls serves the northern part of the State and the lab at Hammonton serves the central and southern half of the State. Following is a list of the various troop compliments along with explanantions of the latest changes.

TROOP "A" Headquarters, Hammonton (Southern New Jersey)

Absecon
Atlantic City Expressway (Hammonton)
Bridgeton
Bellmawr (formerly Mantua)
Mays Landing
Port Norris
Red Lion (Vincentown)
Tuckerton
Woodstown
Berlin (narcotics Bureau)
(organized crime task force)
(criminal justice inv.)

TROOP "B" HEADQUARTERS, TOTOWA (formerly Morristown which is defunct)

Troop "B" covers Northern New Jersey.

Blairstown
Flemington
Hainsville
Netcong
Hope (formerly Newton)
Somerville (criminal justice inv.)
Washington
Hackensack (narcotics, organized crime)
Little Falls

TROOP "C" HEADQUARTERS, PRINCETON

Bordentown
Allenwood (formerly Colts Neck)
Edgewater Park
Edison
Fort Dix (criminal justice inv.)
Hightstown
Hopwell
Edison (criminal justice inv)
Trenton (division HQ)
Keyport (alcoholic beverage control)

TROOP"D" NEW JERSEY TURNPIKE, Administration Building, New Brungwick

New Brunswick (detective bureau)
Newark
Moorestown
Carteret

TROOP "E", GARDEN STATE PARKWAY, Administration Building, Woodbridge

Avalon-Swainton
Bass River
Holmdel
Pleasant Plains
Bloomfield

The functions described next to the station name are in addition to the other routine State Police duties performed in the station's respective coverage area. The New Jersey State Police have many diversified operations and it would be impossible to list them all.

NEW JERSEY STATE POLICE LOW-BAND FREQUENCIES:

All of the aforementioned troops operate on low-band frequencies except for point-to-point communications and other specialized transmissions. If you were to look in a "troop car" you would find either a Motorola or a General Electric unit. All base and mobile units have a seven channel capability with some units having an extra tac frequency. Supervisors may have other capabilities which will be discussed a bit later.

44.94 (F-1) Southern Dispatch - Troop "A"
44.62 (F-2) Central Dispatch - Troop "C"
44.66 (F-3) Northern Dispatch - Troop "B"

44.98 (F-4) Alternate dispatch for all troops/special ops
44.78 (F-5) Statewide car/car - radar
45.00 (F-6) Special operations/surveillance/detectives
44.70 (F-7) Bordentown I-295 patrols
44.82 (F-8) Tactical frequency (rarely used)

Now, to confuse the issue a bit: Troop "B" may dispatch on either F-1 OR F-3, depending upon the need.

Bellmawr, Troop "A" uses F-5 as its primary dispatch frequency to reduce overload.

Bordentown patrols operating on Interstate 295 will normally be communicated with on F-7, but will occassionally be found operating on F-2.

F-6 is also used as the State Police/Department of Environmental Protection coordination frequency.

ALL STATIONS AND ALL MOBILE UNITS MAY TOTALLY CAHNGE THE MODE OF OPERATION AND TRANSMIT OR RECEIVE ON ANY COMBINATION OF THE ABOVE. YOU REALLY HAVE TO KNOW WHAT'S GOING ON TO KEEP UP WITH THAT ACT.....

There are hand-held units (walkie-talkies) capable of conforming with the above communications but are generally found in use at the scene of serious emergencies or special events. Mobile extenders are not used by the NJSP.

Most of you have probably seen 45.82 MHz, 44.90 MHz and 44.80 MHz listed in various places for the NJSP. These frequencies are not, and never have been part of the NJSP radio system. I know, 'cause I nearly went beserk trying to ID them.....

As a conclusion to the low-band section: the old SLEPA (God only knows what that is an acronym for) is no longer in use. It used to be part of the State-wide civil defense network years ago. The last SLEPA unit I saw was growing cobwebs in a garage at Division Headquarters. FYI these frequencies were 39.76 MHz, 39.80 MHz, 39.82 MHz, 39.84 MHz., and 39.92 MHz. Chuck these, too, or you'll qualify for the bug farm....

NEW JERSEY STATE POLICE INTER TROOP, POINT-TO-POINT AND INTERDEPARTMENTAL COMMUNICATION:

Currently, ALL State Police Intertroop communications are conducted on 154.920 MHz. The old point-to-point frequencies of: 155.445 MHZ and 155.460 MHz have been re-assigned for specific purposes and will be described in their proper assignments.

STATE POLICE ENFORCEMENT/EMERGENCY NETWORK (SPEN):

All State Police stations and the majority of other law enforcement agencies are licensed on the SPEN system. The SPEN system has replaced the old SLEPA system previously mentioned. There are four (4) SPEN frequencies:

SPEN 1 - 154.680 - This is a common frequency employed by virtually all law enforcement agencies in the State. It is also used as an interagency frequency during times of emergency involving different agencies, and as a point-to-point frequency between department.

SPEN 2 - 155.475 - This is the Nationwide common police frequency. In New Jersey it is used as a back-up for SPEN 1 and for communicating with adjoining state police departments.

SPEN 3 - 154.725 - This is a common interdepartmental frequency used for all transmissions of a non-emergency nature.

SPEN 4 - 153.785 - Common channel for public safety agencies i.e. paramedics, fire departments, etc. It is also designed to provide a tactical interface between all departments during a disaster or other civil emergency.

The only SPEN frequency which is in common use is SPEN -1. SPEN 2,3 and 4 have rarely been used and are not in full implementation at this time. It should probably go without saying that the nerve center for the above is Division Headquarters in West Trenton. Additionally, Division HQ monitors many more communications than have been listed i.e. forestry, ABC. etc. but as these functions are not part of the State Police Department they have been deleted from this article. Division Headquarters makes StarWars look like somebody's bad dream.....

STATE MARINE POLICE:

The State Marine Police have become an arm of the Division of State Police. They are responsible for enforcement of all boating regulations on the numerous lakes and other waterways within the State. Operations are conducted on 155.445 MHz(formerly a state police point-to-point frequency.) They also have capability to operate on any of the Division frequencies. Stations are located at: Point Pleasant Beach, Monmouth Beach, Avalon, Wildwood, Lake Hopatcong and Atlantic City.

STATE CAPITOL POLICE (State House Security)

Also an arm of the State Police, although personnel are NOT troopers.

Operations conducted on 155.445 MHz.

NEW JERSEY TURNPIKE , GARDEN STATE PARKWAY , ATLANTIC CITY EXPRESSWAY

State Police radio communications on the turnpike and the parkway are rather complex as a system utilizing repeaters, base relays, mobile relays, car-to-car simplex and microwave transmissions is utilized. Many inquires with reference to these operations lead your editor to believe that some of us are "in the dark" with regard to repeaters and the like. Without getting overly technical, I would like to take just a moment and try to shed some light on this subject. A repeater works as follows: a transmission is initiated by mobile unit A. The transmission is then received by the repeater, often through the use of a mobile relay which simply extends the range of the mobile unit, and then is retransmitted by the repeater-again to increase distance or overcome terrain problems, etc. In the above example, as many as three different frequencies may be employed; for our purpose, it is generally only neccessary to monitor the OUTPUT frequency of the repeater. Microwave transmissions are used to increase distance, are basically line-of-sight, and are found in spectrums far above the capability of most scanners (microwave begins about 1.2 Gigahertz). For those of you who have listened to systems employing microwave relays, a signal which sounds asthough it is being pulled through the air by a rocket are most likely hearing the signal as it is retransmitted on a UHF/VHF frequency with the aid of microwave. That's SOME signal,man, pure, unadulterated power....In explaining the following systems I will include both the repeater input and output frequencies in an attempt to clarify problems some of you may have encountered in attempting to listen to these servces. Again, let me emphasize that input frequencies are simplex, and that you generally have to be quite close to the source of transmission in order to hear them.

TROOP "D" TURNPIKE

The New Jersey Turnpike runs basically north and south through the State. It is an aorta, if you would, carrying a tremendous amount of traffic through the State. The "Pike" runs from the George Washington Bridge to its southern terminus at the Deleware Memorial Bridge, and, at some points is twelve lanes wide. In a nutshell, this is WHERE THE ACTION IS. The "Pike" is nearly a self-contained city with large rest areas, restaurants, service areas and the like. The State Police are totally responsible for enforcement of all traffic and criminal statutes along this road.

INPUT	OUTPUT	DESCRIPTION
154.935 (Channel Red)	155.190	Dispatch from northern terminus to exit 14 at Newark. Resumed again at exit 7A and continued to southern terminus at Deleware Memorial Bridge.

154.830 (Channel Amber)	155.580	Dispatch from exit 14 at Newark to exit 7A at Trenton. This is an overlapping dispatch frequency used over the twelve lane portion of the turnpike.
154.935 (Channel Green)	(Simplex)	Car/Car any area.
155.460	(Simplex)	Radar Operations any area
154.680	(Simplex)	Used for communication off turnpike (SPEN 1)

The turnpike operations center, commonly referred to as "OPS", may be reached on either 155.190 or 155.580 depending upon the location of the transmitting mobile unit. State Police dispatchers (usually sergeants) are seperate from operations personnel and are contacted on 155.190 (Newark & Moorestown) and on 155.580 (New Brunswick). State Police located at Carteret have both capabilites. Again, as in the low-band troop frequencies any combination may be utilized at any time.

ADDITIONAL INFORMATION/TURNPIKE NOMENCLATURE:

159.180 - Turnpike Maintenance (Repeater)

453.875 - Contract Road Service vehicles (contact with operations only-Repeater)

The turnpike "splits" at exit 9(New Brunswick) and becomes a twelve lane roadway until it splits again into the eastern and western spurs slightly north of interchange 14 at Newark. The turnpike extension which traverses Newark Bay bifricates at this point and terminates at the Holland Tunnel.

The following roadway designations are used:

NSO ROADWAY - The outer roadway running from the south to the north
NSI ROADWAY - The inner roadway " " " " " " "
SNO ROADWAY - The outer roadway running from the north to the south
SNI ROADWAY - The inner roadway " " " " " " "

These designations apply to the twelve lane portion of the roadway between Newark and New Brunswick

NSE ROADWAY - The eastern extension running from south to north
NSW ROADWAY - The western extension running from south to north
SNE ROADWAY - The eastern extension running from north to south
SNW Roadway - The western extension running from north to south

These designations apply to the turnpike extensions beginning north of Newark. The western extension terminates at the George Washington Bridge while the eastern extension terminates at the Lincoln Tunnel and has a provision to continue north to the George Washington Bridge.

Simply, the direction from which the traffic originates determines the name of the roadway. i.e. traffic coming from the north travelling south would travel on the NSO/NSI roadway, etc.

Terms such as "ET", "TT","WT", etc. refer to different portions of the cloverleafs at entrance and exit points.

The Newark Bay extension is simply referred to as the extension or the "Bay."

Troopers identify with the car number which they are assigned for the tour of duty. A trooper may have more than one ID number if he has to change vehicles. Generally, 800 series cars are marked, 900 series cars are unmarked. Numbers are prominently displayed on the sides, rear and roof of all vehicles with the exception of unmarked units. Nondescript license plates are used.

TROOP "E" GARDEN STATE PARKWAY:

The Garden State Pkway runs the entire length of New Jersey beginning at the New York State line near Mahwah and continuing south to Cape May. It is

restricted to non-commercial vehicles except for the extreme southern end below exit 105 (Monmoth interchange). It has been said that the engineer in charge of the parkway construction walked the entire distance of the highway shortly before it opened to make certain that the job had been properly completed .....

As with the turnpike, the GSP utilizes a combination of communication techniques. This area has been the "testing area" for the coming 800 MHz system, but currently utilizes both the "old" VHF and the new 800 systems. The 800 MHz system will be dealt with a bit later.

VHF SYSTEM :

INPUT	OUTPUT	DESCRIPTION
158.910	(F1) 154.905	State Police Dispatch
158.970	(F2) 155.505	Mobile Repeater
154.950	(F3) simplex	Car/Car
154.680	(F4) simplex	SPEN 1
154.920	(F5) simplex	Point-to-point frequency
155.460	(F6) simplex	Radar Operations
155.475	(F7) simplex	SPEN 2

F-4 and F-7 afford communication with other State Police stations when the GSP troop cars are off the road.

156.120 - Maintenance/engineering (Repeater)

F1 is utilized along the entire length og the GSP. F2 is utilized to"fill in" some dead spots along the roadway.

There are no particular roadway designations as utilized on the turnpike.

Road Service personnel are on the 800 MHz band.

ATLANTIC CITY EXPRESSWAY:

The "ACX" runs the breadth of the State from a point just east of Philadelphia to its terminus in Atlantic City. It is restricted to non-commercial vehicles as is the GSP.

Communications along this roadway are simple in nature, or at least not as complex as the other two toll roads.

453.700 State Police & Maintenance .

453.900 State Police & Maintenance.

These are the repeater output frequencies. For you purists, the input frequencies may be found 5 MHz higher at 458.700 and 458.900. These frequencies are used alternately along the roadway and it simply is a matter of what tower the unit is closest to with regard to what frequency will be used.

CASINO CONTROL COMMISSION:

This is the Gaming Enforcement Unit based at the Atlantic City Casinos. They operate on two frequencies as listed below:

460.175 (repeater)
460.250 (repeater)

DETECTIVE UNITS:

District detective units generally operate on the station frequency to which they are assigned. The UHF frequencies listed in some frequency guides (i.e. 460.xxx & 465.xxx) are no longer in use. There are several new frequencies reserved for narcotics investigators and organized crime task force personnel which would fall into the realm of "sensitive" material and, as such, your editor feels that they should not be made a matter of public information. Not to worry, it's doubtful that anybody would understand the communications anyway. Detective units have four digit radio ID numbers.

AIRCRAFT UNITS:

The Division of State Police operates a number of helicopters and fixed wing aircraft.. They are based at Mercer Field, adjacent to Division Headquarters in West Trenton. Very briefly, the Air wing is capable of doing just about anything from surveillance to rescue to medivac assignments and have a radio system which would make James Bond proud. The aircraft have the capability to communicate with virtually all facets of the State Police and municipal departments. Troop frequencies are commonly utilized as is SPEN 1 for interdepartmental communication. They're a hard bunch to handle, those fellows.....rather clandestine, too.....

That's about it for the everyday, routine communication of the NJSP. If your editor hasn't (A) bored you to pieces, or (B) throughly confused you, he will make a meagre commentary on the impending 800 MHz system.

THE NEW JERSEY STATE POLICE 800 MHz RADIO SYSTEM

Sevral years ago the New Jersey State Police began an active research program to upgrade their present radio system which has been in use for over twenty-five years. Given that the average life expectancy of a mobile or base unit is somewhere in the vicinity of seven years, the system has had problems. It may be difficult for some of you to believe this, but there have actually been field detectives who were on duty and did not have ANY communication equipment in their cars.

After due consideration, Motorola Communications was awarded the contract to implement what is supposed to be a state-of-the-art 800 MHz system. Word has it that this system will be a model system, and that it will not require much adjustment once it is up and functioning for a long period of time. The words "up and functioning" apparently are the flies in the ointment at the present.

In late 1985, the wheels were set in motion to have Motorola build, install and set up the beginnings of the system. For those of us in New Jersey who were "in the know," so to speak, and paid attention, began to see some State Police vehicles zipping around the State with 3 " whips on the roof. Obviously, then, something had pregressed beyond the planning stage. A little discreet investigation by your editor revealed that the first phase of the system had arrived and that the Garden State Parkway had been chosen as the testing site. Shortly, towers began to appear along the Parkway which had all the markings of belonging to the new system. Telegraph Hill, adjacent to the Parkway in south-central New Jersey was designated as the research center for the project.

All State Police vehicles, maintenance vehicles and Parkway contract road service vehicles have been outfitted with the 800 MHz units. The State Police retained the VHF units and use them as a back-up for the new system. At this time, however, the old units appear to be more than a back-up. As with any new development, there have been problems. Transmissions are weak and noisy, and in some locations virtually non-existant. Car to car communication on the 800 system is not good. Careful inquiry revealed a great deal of dissatisfaction among those ladies and gentlemen for whom this system could mean the difference between life and death.

Your editor personally spent an entire day at Telegraph Hill with a Bearcat 800 XLT and was not impressed. The old VHF system seems to be much more reliable and effective, even with its shortcomings. Daily monitoring of the 800 system has not revealed any great improvement.

With regard to the rest of the State, Large (200') transmission towers have been errected at the various troop headquarters. Here, however, is where the progress has seemed to stop. There has been no further activity noticed over the last several months. A number of serious questions have been raised with regard to the effectiveness of the new system. Apparently, difficult terrain problems, repeater locations and the like are going to have to be looked at a little more closely to determine if the system is truly going to work. On paper the system is really something. Practicality may be another matter.

Briefly, the 800 MHz system is to be trunked, employ Motorola Digital Voice Protection encryption and afford communication between any mobile units anywhere in the State. Oddly enough, I have looked everywhere I could think to locate the FCC frequency assignments and have not found them. I have included a list of the Parkway frequencies at the conclusion of this article that I personally monitored, as well as a brief description of what their purpose is. Beyond that, I'm as much in the dark as anyone else at this point.

Everybody that I have spoken with about the new system seems to develop a severe case of sudden amnesia. It is my understanding that the State Of New Jersey will spend somewhere between 10 and 20 million dollars for the system, but only after it has been up and functioningfor one year. I will keep a close eye on this situation and pass on information as it becomes available. I would be most appreciateive if any of you happen to hear of any further problems, or solutions that you please drop me a line and let me know.

Due to the length of this article I am going to save some material that I have received for a future column. Since we have a two month span between submitting articles and actual publication, I would like to take a moment to extend my sincere thanks to Les Mattson (NJ-187) who has been a true friend and sent me lots of useful correspondence, to Terry Stader(MI-062) our Amateur Editor who sent me a list of Maine Public Safety frequencies, and finally to Bob Coburn(NH-03) who was kind enough to send me a copy of his latest publication, THE OFFICIAL NEW HAMPSHIRE SCANNER GUIDE for review. Looks great, Bob..... If I have ommitted anybody else, please excuse my oversight.

Until next month, then....73's to you all.....

800 Frequencies in use on the GSP:

(F-1) 851.3375 State Police, Road Service (poor quality)

(F-2) 852.1625 State Police, Road Service (worse quality)

(F-3) Maintenance 852.7375

(F-4) Maintenance, I think 853.8625

ADDENDUM

In reviewing the article, your editor noticed that he inadvertantly left some information out. The following may be of some interest:

With regard to the low-band system used by the State Police Stations, the troop headquarters all have capability to increase their transmission output power from 250 watts to 500 watts for communication with distant mobile units. From time to time a comment similar to "Sommerville, turn on the tower" will be heard. The trooper requesting this is asking for an increase in transmission power from the station. The reason that the towers are not "turned on" all the time is that they would interfere with other sub-stations.

DRUMTHWACKET (some name, Huh..) is the Governor's official residence located in Princeton. Communication is maintained between Princeton HQ and the Governor's residence on: 154.920 MHz.

I did make reference to some ID proceedures in the body of the article. Here is the complete breakdown for those of you who may be interested:

Road troopers assigned to stations other than Division HQ and the controlled access highways ID by the number of the troop car that they are assigned for their tour of duty. There apparently are no designations, or blocks of troop car numbers assigned to any particular station. If a trooper changes vehicles during his shift, he also cahnges his ID number.

All detective units have four digit ID numbers. Detectives are generally assigned vehicles on a permanent basis so they general retain the same ID number.

Turnpike, Garden State Parkway And Atlantic City Expressway cars also ID by troop car number. License plates are nondescript. On the Pike, they generally have TPK-XXX; Parkway cars have a SG-XXX number and display the green and yellow Parkway logo on the right rear corner of the bumper. Expressway cars ID by troop car number and also display SG-XXX license plates. Detective units display regular issue license plates Statewide.

PUBLIC SAFETY — GREAT LAKES:

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows — Illinois, Indiana, Wisconsin, Michigan, Kentucky, and Ohio:

Jack Waterman, 466 Kings Way, Mundelein, IL 60060

HELLO! Welcome to Public Safety/Great Lakes for September, 1986. School's back in session and the kiddo's will be filling the crosswalks near their schools. SO LET'S BE CAREFUL OUT THERE !! The call I dread the most is "10-50 PI -- car vs child."

Also, now that summer vacation's over, you should have long lists of new and updated freqs gathered since June which you could submit for publication here. What are you waiting for - join the ranks of PS/GL contributors.

--

DETROIT September's opening contribution comes from **ROBERT** [MI-108], who sends a list of Detroit hospital and ambulance freqs. **ROBERT** writes "I included call signs and locations when I monitored them; however, I am lacking some information on a few freqs such as 155.325 where I was not able to determine the hospital or 462.975 where I was not able to hear a call sign or figure out which ambulance company I was listening to. Maybe some of the other local members could add to the list or correct any errors they catch." Here's **ROBERT**'s contribution:

Freq.	Call	Name-Use	City	County
46.000		Universal Ambulance		Macomb
46.060		Ruehles Ambulance		Macomb
151.775	KJU625	Oakland General Hospital Security	Madison Heights	Oakland
155.160	KTR616	Detroit EMS	Detroit	Wayne
155.175	WYK472	St Clair County EMS		St Clair
155.220	KQR330	Unknown Hospital Security may be from Pontiac		Oakland
155.235	KRZ988	St John Hospital Security	Detroit	Wayne
155.235	KSV642	Providence Hospital Security	Southfield	Oakland
155.235		Suburban Ambulance pager (Paramed)		Oakland
155.265	WZJ375	Oakland County Emergency Medical Services & Disaster Control		Oakland
155.265	KXY367	Community EMS Ambulance		Oakland
155.280	KNCP225	Suburban-Fleet Ambulance (Paramed)		Oakland
155.295	KNDK512	Huron Valley Ambulance		Washtenaw
155.325	KLK691	Unknown Hospital	Detroit	Wayne
155.340		(HEAR) all Hospitals & Ambulances		
155.400	KNFP387	Med Comm		Macomb

155.400	WZJ375.	O Comm		Oakland
155.745	KUY608	South Lyon Ambulance	South Lyon	Oakland
157.450	KJW648	William Beaumont Hospital Pager	Royal Oak	Oakland
453.175		Detroit Medical Center Pager	Detroit	Wayne
460.650	KTY435	William Beaumont Hospital Security	Royal Oak	Oakland
461.375		Detroit Medical Center Security	Detroit	Wayne
462.600		Henry Ford Hospital Security	Detroit	Wayne
462.950		Medcom-Medical channel assignments		
462.975		Unknowen Ambulance maybe Taylor Ambulance and/or other		Wayne
463.000		Med-1 468.000 mobile		
463.025		Med-2 468.025		
463.050		Med-3 468.050		
463.075		Med-4 468.075		
463.100		Med-5 468.100		
463.125		Med-6 468.125		
463.150		Med-7 468.150		
463.175		Med-8 468.175		
149.440		Ontario Ministry of Health pagers		Ontario Essex
149.605		Ontario Ministry of Health Windsor dispatch		Ontario Essex
150.100		Ontario Ministry of Health County Dispatch		Ontario Essex
150.665		Ontario Ministry of Health Windsor Dispatch	Windsor	Ontario Essex
149.135		Ontario Ministry of Health Ambulance to Hospital	Windsor	Ontario Essex

Thanks, ROBERT, for that look at Detroit EMS.

--

CHICAGO POLICE DEPT. Last month I ran a profile of CPD District 8, provided by **RON** [IL-310], and noted that he also gave me a copy of the incident disposition codes. I thought, at that time, that everyone already had those codes. Turns out I was wrong [again - huh guys?]. Anyway, here, by popular demand, are the CPD incident clearance codes, compliments of **RON**:

1.	disturbance - domestic	A,Adam	not a bonafide incident
2.	disturbance - teenagers	B,Boy	no such person found
3.	disturbance - drunk	C,Charles	no such address
4.	disturbance - noise	D,David	no police service necessary
5.	disturbance - other	E,Edward	perpetrator gone on arrival
6.	illegal parking	F,Frank	peace restored
7.	sick removal/confinement	G,George	advised of warrant
8.	injured person	H,Henry	advised to recontact police
9.	person down	I,Ida	removed to medical facility
10.	animal bite	J,John	returned to family/home
11.	suspicious person/auto	K,King	taken to district station
12.	citizen calling for help	L,Lincoln	information report submitted
13.	lost person found	M,Mary	traffic citation issued
14.	auto/burglar/hold up alarm	N,Nora	ordinance complaint issued
15.	inhalator call	O,Ocean	advised legal assistance
16.	fire	P,Paul	other police service rendered
17.	escort	R,Robert	arrest made
18.	traffic accident	X,X-ray	miscellaneous incident report
19.	other miscellaneous incident	Y,Young	animal bite information report

To tell the truth, I almost never monitor the Zone radios. Are these codes used, regular CPD Zone monitors? How about some fresh input on CPD?

--

BERRIEN COUNTY, MICHIGAN This month's southwestern Michigan report comes from **JIM** [CA/SF-030], who relocated here from California about a year ago. **JIM** sent personal loggings for the county police network, miscellaneous county agencies, and area fire departments not dispatched by the county. Here's his data:

Berrien County SD & Various Local PD's - KQB 341

F-1	460.100 [R]	North - Dispatch
F-2	460.425 [R]	South - Dispatch and License/Wants checks
F-3	460.275 [R]	North - License/Wants checks and tactical
F-4	460.275 [S]	Tactical
	156.150 [S]	Surveillance {mobiles}
	155.370 [S]	Local area broadcasts only {'POINT' in most states}

Common Codes and Terms

OUIL	Operating under the influence of liquor
DWLR	Driving while license revoked
DWLS	Driving while license suspended
UBAL	Unlawful blood alcohol level
MDP	Malicious destruction of property
MIPI	{unknown - readers??}
57	MSP, St Joseph Post
53	MSP, Niles Post
PDA	Property damage accident
A&B	Assault and battery
B&E	Breaking and entering
BOL	Be on the lookout [for]
BELOW	The jail
OPEN INTOX	Open liquor in vehicle
TX	Telephone
SIGNAL 30	No wants or warrants
10-10	Out of service, subject to call
10-42	Home

Other 10-codes are the standards. The "10-" may be dropped, such as "I'm 76."

Berrien County Unit Numbering Scheme

First two digits {one digit if first is 0-9} = identify city, village, or township

300	Benton Twp - {not dispatched on network}
800	Coloma Twp
1200	Lincoln Twp
1500	Berrien Springs - Oronoko Twp PD: Oronoko Twp units
1800	St Joesph Twp
1900	Unknown - Sodus Twp ???
2200	Weesaw twp
2900	Baroda-Lake Twp
3000	Eau Claire
3900	Berrien Springs - Oronoko Twp PD: Berrien Springs units
4000	Bridgeman
4100	Coloma city
4200	Stevensville
4400	Watervliet
4600	Buchanan

Last two digits = identify unit type {Chief, Sergeant, etc.}

00	Base station
01	Chief
02	Unknown
10	Sergeant
11-13	Patrol officers

Berrien County Sheriff Unit Numbering Scheme

First two digits

97	Unknown, possibly plainclothes or detectives
99	Uniformed units

Second two digits - first two digits = 97
Unknown - numbers monitored occur randomly from 01 to 83
Second two digits - first two digits = 99

01-09 unknown
10 Sergeant
11 Patrol {also 21, 31, 41, 51}
19 Traffic unit {also 29, 39}

Other Berrien County Loggings

453.600 [R] Animal Control - KFM 338 - Base ID "Berrien"
33.02 [S] County Road Commission
155.925 [S] Health dept
154.250 [S] FIRE - KNAB 415
154.295 [S] FIRE - mutual aid

All county Fire Depts are dispatched by the SD except:
Benton Harbor - KWX 955 Benton Twp - KCO 364 Niles - KNDC 769
Niles Twp - KNFH 969 St Joseph - KHX 651

Thanks, **JIM**, for that local review, and for sharing the results of you personal monitoring time with the rest of the column readers.

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READER PARTICIPATION PROJECT I received a very interesting proposal from **DAVID** [WI-035] this month. He sent me printouts of his computerized listings for Winnebago, Boone, McHenry, Jo Davies, and Stephenson Counties. the printout for Boone was in a specialized format {see below}, consisting of his {unconfirmed in some cases} listings, with spaces for comments, on multi-part paper. **DAVID**'s offer is as follows: members able to monitor the counties listed above may write to him and request a county printout. The multi-part printout should be marked up to indicate confirmation of data given, any necessary corrections, and any additional data obtained. One copy of the marked up printouts will then be returned to **DAVID** who will incorporate the input into his data base and provide an updated printout to each participant.

A copy of **DAVID**'s data base for Stephenson County and <u>one page only,</u> sorted by transmitter city, of the specialized format for information exchange for Boone County appear below. If you'd like to work with **DAVID** {as well as **RANDY** [WI-059] and **SCOTT** [WI-039]} on this project, write directly to him:

David Wilcox [WI-035]
1711 Excalibur Dr
Janesville, WI 53545

39.500	Stephenson County Of	PP	KSA467	Freeport	Police
45.44	Stephenson County Of	PL	KRZ854	Freeport	ESDA
46.100	Cedarville Fire Prot	PF	KNIK975	Cedarville	Fire
47.500	Freeport Animal Hosp	PS	KNGN916	Freeport	Vet
151.025	Kent Township Of	PH	KNDB603	Kent	Highway
151.025	Loran Township Of	PH	KNDN547	Pearl City	Highway
151.025	Rock Run Township Of	PH	KXH663	Rock City	Highway
151.025	Stephenson County Of	PH	KFG534	Freeport	Highway
151.115	Dakota Township Of	PH	KNDR555	Dakota	Highway
151.115	Ridott Township Of	PH	KNFZ512	German Valle	Highway
151.115	Silver Creek Townshi	PH	KNBW235	Freeport	Highway
151.115	Oneco Township Of	PH	KNBW233	Oneco	Highway
151.115	Waddams Township Of	PH	KNBW236	Mc Connell	Highway
151.115	Rock Grove Township	PH	KNBW234	Rock City	Highway
151.115	Winslow Township Of	PH	KNDV415	Winslow	Highway
151.130	Lancaster Township O	PH	KNCC482	Freeport	Highway
151.130	West Point township	PH	KNDD727	Lena	Highway
151.130	Kent Township Of	PH	KNDB603	Kent	Highway
151.130	Loran Township Of	PH	KNDN547	Pearl City	Highway
151.130	Buckeye Township Of	PH	KWX964	Freeport	Highway
151.150	Silver Creek Townshi	PH	KNBW235	Freeport	Highway
151.190	Freeport Park distri	PO	KXC628	Freeport	Parks
151.280	Illinois State Of	PO	WZU488	Lena	DNR
151.445	Illinois State Of	PO	WZU488	Lena	DNR
152.0075	Freeport Memorial Ho	PS	KRP871	Freeport	Hosp.Pager
154.100	Freeport City Of	PL	KNED347	Freeport	Use/Unk
154.190	Davis Fire Dept.	PF	KKH468	Davis	Fire
154.190	German Valley Fire P	PF	KCZ486	German Valle	Fire
154.190	Freeport City Of	PF	KDV389	Freeport	Fire

154.190	Pearl City Of	PF	KBZ962	Kent	Fire
154.190	Pearl City Of	PF	KBZ962	Pearl City	Fire
154.190	Rock City Of	PF	KKC521	Rock City	Fire
154.190	Freeport City Of	PF	KBO293	Freeport	Fire
154.710	Stephenson County Of	PP	KSA467	Freeport	Pd Input
154.815	Freeport City Of	PP	KNCX766	Freeport	PD Base
154.875	Stephenson County Of	PP	KSA467	Freeport	PD Base
154.875	Lena Village Of	PP	KDA739	Lena	Sheriff
155.055	Stephenson County Of	PL	KNBH533	Freeport	Use/Unk
155.205	Orangeville Communit	PS	WNAL588	Orangeville	Use/unk
155.235	Pearl City Veterinar	PS	KKR538	Freeport	Vet
155.235	Lena-Winslow Communi	PS	KNES413	Lena	Use/Unk
155.235	Pearl City Vet	PS	KKR269	Pearl City	Vet
155.265	Freeport School Dist	PS	KKL965	Freeport	School
155.265	Orangeville Vet	PS	KEK793	Orangeville	Vet
155.280	Ill Hosp Assoc Freep	PS	KUI563	Freeport	Amb.
155.340	Freeport Menorial Ho	PS	KRP871	Freeport	Hosp
155.370	Stephenson County Of	PP	KSA467	Freeport	HI P-P
155.370	Lena Village Of	PP	KDA739	Lena	HI P-P
155.685	Freeport City OF	PP	KNCX766	Freeport	PD Input
156.030	Stephenson County Of	PP	KSA467	Freeport	PD Input
156.030	Lena Village Of	PP	KDA739	Lena	Police
156.030	Lena Village Of	PP	WDP489	Lena	Police
156.150	Stephenson County Of	PP	KSA467	Freeport	Police
159.300	Illinois State Of	PO	WZU488	Lena	Use/Unk
159.375	Illinois State Of	PO	WZU488	Lena	Use/Unk
453.950	Freeport City OF	PL	KAS678	Freeport	Use/Unk

Freq. / Record Number	Licensee	Sv	Call	Xmit Location	Xmit City	Agency
154.370	Boone County Of	PF	KWS588	615 N. Main St	Belvidere	Fire
445	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.515	Beaver Valley Electr	IB	KNHP854	1797 Valley View	Belvidere	Use/Unk
446	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.515	Robertson lock Servi	IB	KRX945	1027 S State	Belvidere	Use/Unk
447	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.515	Stevens Dale	IB	KNJM902		Belvidere	Use/Unk
1420	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.515	Shook, Dean	IB	KNJN420		Belvidere	Use/Unk
1421	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.540	Boone County Council	IB	KTF299	426 South State St	Belvidere	Use/Unk
448	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.625	Schumacher Howard	IB	KNHP679	3718 Irene Rd	Belvidere	Farm
449	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.625	Robert Mickey	IS	KYX496	7615 Grange Hall	Belvidere	Farm
450	Confirmed Or Delete:( ) Notes:( ) Use:(					
154.625	Gallano Farms LTD	IS	KZP263	3180 Newburg Rd	Belvidere	Farm
451	Confirmed Or Delete:( ) Notes:( ) Use:(					
155.025	Boone County Of	PL	KVA821	123 S State St	Belvidere	Use/Unk
452	Confirmed Or Delete:( ) Notes:( ) Use:(					
155.070	Boone County Of	PP	KSB330	615 N Main St	Belvidere	Police
453	Confirmed Or Delete:( ) Notes:( ) Use:(					
155.280	IL Hosp Assn/Highla	PS	KBA288	1625 S State St	Belvidere	Amb.
454	Confirmed Or Delete:( ) Notes:( ) Use:(					
155.295	Community Unit Schoo	PS	KNIB716	Randolf St	Belvidere	School
455	Confirmed Or Delete:( ) Notes:( ) Use:(					

155.310	Belvidere , City Of	PP KQM727 615 N Main St	Belvidere	Police
456	Confirmed Or Delete:(	) Notes:(	) Use:(	
155.340	Highland Hospital	PS KJY424 1625 S State St	Belvidere	Amb.
458	Confirmed Or Delete:(	) Notes:(	) Use:(	
155.370	Belvidere , City Of	PP KQM727 615 N Main St	Belvidere	HI P-P
457	Confirmed Or Delete:(	) Notes:(	) Use:(	
155.370	Boone County Of	PP KSB330 615 N Main St	Belvidere	HI P-P
459	Confirmed Or Delete:(	) Notes:(	) Use:(	
155.805	Belvidere City Of	PL KXB445 210 Whitney St	Belvidere	Use/Unk
460	Confirmed Or Delete:(	) Notes:(	) Use:(	

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Well, that's it for this month. I hope you found something useful and/or interesting in the column. And I hope you will use {used?} the Labor Day holiday weekend to fire up the scanner and

TRACK 'EM DOWN !! WRITE 'EM UP !! SEND 'EM IN !!

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming to:

George N. Hoggatt, 17473 E. 16th Dr., Aurora CO 80011
electronic mail:<Compuserve-75376.673>,<Delphi-JORG>,<Source-BBZ812>

****

Things are really slow column wise. No input, no column. Do have a couple of interesting things this month.

OREGON Dennis ??-???

PORTLAND

NET	AGENCY	FREQUENCY	USE
1	Central	460.325	Central Precinct
2	East	460.200	East Precinct
3	North	460.100	North Precinct
4	Multnomal County Sheriff	460.125	MCSD
5	Portland car to car	460.425	car to car
6	city	460.250	tactical
7	county	460.350	car to car and info
8	city/county	460.050	general info

10-0 or Code 0 Officer down
10-19 Enroute back to office
10-61 Prisoner in custody
10-62 Transporting citizen/prisoner
10-64 Prisoner transport complete
10-73 Report back to your office
10-79 Out of service, ending shift
10-81 Writing reports
10-82 Coffee break
10-83 Meal break
10-84 stopping a vehicle or person

RAILROADS

Gary L. Sturm and
Bill Farmer, Editors

Send information about railroad frequencies and their uses, railroad radio system details, and related questions to:

Bill Farmer, P.O. Box 1838, Thousand Oaks, CA 91360

Hello again from the co-editors of the Railroads column. Our first report this month is from Robert D. Creedy (CA-HU-004) who informs us that Eureka Southern Railroad, headquartered in Eureka, California, has finally changed its radio operations from 161.550 MHz (the Northwestern Pacific road channel) to 161.520 MHz. The change took place shortly before June 20, 1986. Our thanks to Robert for bringing us up to date and for sending several newspaper clippings on the planned resumption of passenger service on the Eureka Southern line this summer. A new company was to take over operation of the North Coast Daylight passenger trains, with excursions to begin May 17, but all reservations were canceled and the startup was suspended indefinitely when they found they could not obtain the required amount of liability insurance. Several other passenger train excursions across the country have been canceled this year because of the growing nationwide insurance crisis. In the case of the North Coast Daylight, the company stated that it was qualified for insurance and had the money to pay for it, but could not find any insurance company that would provide the needed coverage, at any price.

METRO-NORTH COMMUTER RAILROAD

by MARK J. LANDGRAF (NY-336)

161.280	Road
160.950	Yard
160.410	Maintenance of Way
161.220	Police
161.160	Electric Traction-New Haven Line
160.770	Stationmaster-Grand Central Terminal
160.335	Tunnel Emergency channel-Grand Central Terminal
160.545	Car Dept.-Harmon, Grand Central Terminal, North White Plains, Putnam Jct.
160.860	Stores Dept.-Harmon Shops

[Thanks for responding to our plea for help, Mark!]

SAN DIEGO (CALIF.) TROLLEY

by BRIAN M. JOHNSON III (CA-SD-073)

The San Diego Trolley operates a line from the Santa Fe Railway depot in downtown San Diego to San Ysidro on the Mexico-U.S. border. Another line recently went into service from the Santa Fe depot to Euclid Avenue station in southeast San Diego. Eventual plans are to extend that line all the way to El Cajon (a suburb of San Diego) but recently problems have developed on obtaining federal and state funding for the construction of the extension.

The following information concerns the codes used for the different units operating with the San Diego Trolley system. The San Diego Trolley is under the jurisdiction of the Metropolitan Transit Development Board (MTDB). Most of the communications heard are on 160.665 MHz.

Unit Numbers	Designation
100 through 103	Administration
200 through 207	Yard duty maintenance crews
300 through 306	Trolley security
400 series	On-line maintenance crews
500 series	Fare inspectors
600 series	Revenue (machine fare collectors)

SHORTLINE ROUNDUP

by GARY L. STURM (IN-045)

The Ahnapee & Western Ry. Company owns 14 miles of trackage based in Green Bay, WI. The railway only maintains the trackage and the Green Bay and Western operates their locomotives on the Ahnapee & Western trackage using their assigned frequency of 161.250 MHz for road use.

The Appanoose County Community RR operates in lower southeastern Iowa. It runs from Centerville, IA 12 miles to a connection with the Norfolk & Western Ry. 161.265 MHz is the radio frequency they use.

The Aroostook Valley RR operates 25 miles of trackage from Presque Isle, ME using two locomotives. This railroad uses the radio frequency 464.950 MHz for its general operations.

The Austin, Todd, & Ladd Railroad is a shortline based in Watonga, OK, and is named for the three grandsons of the owner! It has 39.7 miles of trackage and uses radio frequency 160.785 MHz for its general operations.

The Brownsville & Rio Grande International Railroad calls Brownsville, TX its home as indicated by its name. The BRG runs 33 miles of trackage in Texas and uses 161.565 MHz for all its radio communications in running the railroad.

Due to the demise of the Rock Island Lines and the great abandonments of railroad trackage in Iowa, many new shortlines have been formed. One such shortline is the Cedar Valley Railroad in Osage, IA. It operates 113 miles of trackage and utilizes two railroad frequencies for its operations. 160.605 MHz is for road operations and 161.535 MHz is for switching.

The Delaware Coast Line is located in Lincoln, DE and operates on its own radio frequency of 160.455 MHz for general operations and uses 160.800 MHz for interchange with Conrail. The railroad is 22.90 miles long and uses 2 diesel-electric locomotives.

The Hartwell Railway operates 10 miles of trackage with two locomotives out of Hartwell, GA. The railroad uses the radio frequency 158.240 MHz for its general operations.

The Hutchinson & Northern Railway operates northwest of Hutchinson, KS on 6 miles of trackage. It uses 160.380 MHz for its general operations.

The Indiana and Ohio RR operates two separate lines: one from Brookville, IN to Valley Junction, OH and another operation between Monroe, OH and Mason, OH. Both operate on 160.575/161.385 MHz with a repeater system for general operations.

The Kelley's Creek & Northwestern RR Company operates 7 miles of trackage between Lewis and Shrewsbury, WV and uses two-way radio communications on 160.620 MHz for general operations.

The Lackawanna Valley RR operates northeast of Scranton, PA to Carbondale, PA. The railroad operates 23.50 miles of trackage and uses radio frequency 161.310 MHz for all operations.

The Little Rock Port Railroad (Little Rock, AR) is a switching railroad operating within the confines of the Little Rock Port Authority Industrial Park. It operates its own sidings, marshalling yard and trackage totaling 10 miles and uses UHF radio frequency 453.750 MHz for all operations.

In Alabama the Mary Lee Railroad Company was formed in 1910 serving the area surrounding Birmingham. At that time the railroad was privately owned and was not a common carrier. As of January 1, 1985, Mary Lee RR has become an accepted ICC common carrier and has renamed itself the Jefferson Warrior Railroad. However, the railroad has retained its business band radio frequency of 153.260 for all its railroad operations rather than seeking a railroad band frequency allocation from the AAR.

The Minnesota Valley Transportation Company operates a railroad based in Morton, MN with its offices in Redwood Falls, MN. It has 141.5 miles of trackage and has a railroad frequency of 161.265 MHz for all operations on the railroad.

The New England Southern RR Company operates several branches in both Massachusetts and New Hampshire. The railroad uses its assigned radio frequency of 161.025 MHz for all operations on all branches. A total of 100 miles of trackage is in use.

The North Carolina Ports Railway operates port switching lines in both Wilmington and Morehead City, NC. In the past it was assigned a business radio frequency, but now uses an AAR authorized railroad frequency of 160.320 MHz for all port switching operations.

The St. Maries River RR Company based in St. Maries, ID, operates 71 miles of mainline from Union Pacific connection at Plummer, ID through St. Maries to the Burlington Northern connection at Bovill, ID. The railroad uses a repeater system with 161.055 MHz being the input frequency and 160.275 being the output frequency.

The Shore Fast Line operates 40 miles of trackage in New Jersey from its Conrail connection at Winslow, NJ to Atlantic City and a line to Linwood, NJ. This railroad uses frequency 160.335 MHz for its road channel and 161.385 for portable radios for communications between the conductor and engineer.

The Strasburg Railroad Company is in Strasburg, PA and operates tourist and museum trains during the season. The Strasburg uses radio frequency 161.235 MHz for all tourist and general operations. To contact the Strasburg RR for further information, write to P. O. Box 96, Strasburg, PA 17579.

The Tennken RR Company operates between Dyersburg, TN and Hickman, KY. The railroad operates 51.70 miles of mainline and uses two railroad radio channels in its operations. It uses 160.365 MHz for its road channel and 160.935 for switching.

Salem, NJ has a shortline appropriately named the West Jersey Short Line. It has 18 miles of track and this railroad also uses two-way radio operating on frequency 161.025 MHz.

The West Tennessee RR operates 43 miles of trackage based in Trenton, TN and operates on two assigned railroad frequencies: 161.475 MHz for general operations and 161.070 MHz as a remote relay frequency. And naturally since there is a West Tennessee Railroad there has to be an East Tennessee Railroad! This one is based in Johnson City, TN and operates on 161.235 MHz.

BRITISH RAIL

by GARY L. STURM (IN-045)

I have received new information on radio frequencies from British Railways. First 453.550 and 453.775 MHz are two channels used for maintenance of way equipment, station announcements and for marshalling yards. The communications department would give no details on the VHF radio system for controlling trains on their mainlines except for the following data. There are 12 VHF channels for various mainline networks in the 196-198 MHz and 204-206 MHz bands. If any listeners in England can find these radio frequencies, please forward them to the editors indicating what rail line you have received these radio frequencies on.

That's all we have for this month—please send us reports on the railroad radio frequencies you verified and/or discovered during your travels this summer. See you next month...

—Gary & Bill

TECHNICAL TOPICS

Send all equipment reviews, technical articles, technical tips, and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions to:

Stephen A. Kayworth, 21551 Kapok Circle, Boca Raton, FL 33433

OVERDRIVE FOR THE MX-7000

One of the BIG complaints I have received about both the MX-5000 and MX-7000, by Regency, is their slow scan/search rate. It has been described by one reader as "slow and slower." So far, Regency has not made any changes to either of these units to increase the scan rate, but one possible solution was recently presented in Monitoring Times (May 1986, vol. 5, #5, p. 39). The following is a description of the modification as it was described in MT.

The article states that the scan speed is controlled by resistor **R6** which currently has a value of 150K ohms. It is suggested that lowering the value of this resistor will increase the scan rate. R6 is probably part of an R/C timing circuit - R/C meaning "Resistor/Capacitor." When the value of the resistor in the timing circuit is lowered, the time constant of the circuit is shortened. A shorter time constant will result in a faster scan rate. It's an inverse relationship.

What would be a simple way to lower the value of R6 without major surgery on the unit? You could remove the original resistor and replace it with one of lower value, but that would involve soldering on the bottom side of the circuit board. Another way, which is suggested in the article, is to solder a resistor in parallel with the existing resistor. What would this do to the overall value of R6? If you recall from my recent article on Ohm's Law, I gave the formula for finding the value of two resistors connected in parallel (May 1986, p. 79). The MT article states that the value for this added resistor should fall between 27K ohms and 39K ohms. Using a median value of 33K ohms and plugging this value into the formula, you get the following results:

$$\frac{150K \times 33K}{150K + 32K}$$

Result = 27K ohms

As the results show, adding this resistor in parallel with R6 will lower its overall value, thus increasing the scan rate.

R6, which is labeled on the board, is next to the microprocessor (IC-1) in the front panel. R6 is mounted vertically on the board. To attach the 33K ohm resistor to R6, "scrape the paint off the upper lead of R6, and solder (the) new resistor from that lead to the solder pad (on the PC board)." Figure 1 shows (approximately) where these components are located on the MX-7000 circuit board.

One of the results of performing this modification is that the scan/search rate will be about four times faster than it was. Also, the keyboard beep becomes almost inaudible, due to the fact that the frequency of the beep is much higher now.

One draw back, which is mentioned in the article, is that the memory is only maintained for about one minute after the plug is pulled. This is "drastically reduced" from what is normal. Another drawback is that "frequencies entered into scan memory in the 500 Hz resolution (like 500.2125) might be skipped when scanning...." To overcome this problem, "just enter 500.21 instead of 500.2125, for example, and the scanner will stop every time."

One other point that is made in the MT article is that the "up/down tuning is extremely fast using the 12.5 KHz steps." The up/down tuning procedure is described as follows:

Just enter a frequency, choose 12.5 Khz, press up or down, and, with your finger still on up or down, press speed. It goes so fast you can't read all the digits. If you pass an active channel, release up/down and press the opposite direction. the tuning speed will now be about 1/3 as fast so you can see what you're doing.

For the record, I was made aware of this modification by Jim (GA-058) the "New Products Review" editor. Jim made this mod to his MX-7000 and had some comments of his own.

I did this mod to my MX-7000 and it works great! I used a 32K ohm resistor....The memory will last about 10 hours before being cleared.

At first I installed an external switch for the mod to be able to switch it in and out to check for side effects. It worked out so well that I disabled the "Lock" switch and rewired it for the modification. It looks much better than an external switch and works great.

Enclosed is more info on my adaptation of this mod. It isn't that difficult, but I would discourage anybody, not qualified, from trying it.

I want to emphasize what Jim has said about doing this mod yourself. If you don't have the proper tools or the expertise to do this yourself, find someone in your area who does. There are many technically minded and technically capable people around that would be glad to lend a hand.

The following modification, as described by Jim, will afford you the benefits of the original mod described in Monitoring Times while giving you the luxury of being able to switch it on and off with the lock switch.

1. Follow the directions for the modification, but solder two wires, about 4-5" in length, to either side of resistor R6. These wires are attached to R6 in place of the 33K ohm resistor. Attach them in the same way as was describe for attaching the resistor.

2. Take out the display PC board from the front panel. The screws that hold the board to the panel are marked with arrows on the board itself.

3. Unsolder the Lock switch and remove it. See figure 2 for approximate location of Lock switch

4. Cut circuit board traces where indicated in figure 3.

5. Install jumper wire where indicated in figure 3.

6. Re-install and re-solder the Lock switch. Solder one of the wires from step one to the top switch contact as shown in figure 4.

7. Solder the 33K ohm resistor to the center contact on the switch and then solder the other wire from step one to the free end of the resistor. See figure 4.

8. Check all work and test it out!

Once the modification is complete, turning the Lock switch on will give the faster scan/search rate. Turning the Lock switch off will return the unit to its normal rate - slow.

During the next month, I am going to have the opportunity to watch over the shoulder of a friend of mine who wants to perform this modification. I will report the outcome next month. I also hope to have some pictures to go with the report. I'll have to see how they come out.

If you would like to have further information, Jim has told me to encourage members to contact him directly. He will be glad to hear from you. His address is:

Jim Abdu (GA-058)
New Product Review Ed.
1203 N. Crossing Way
Decatur, GA 30303

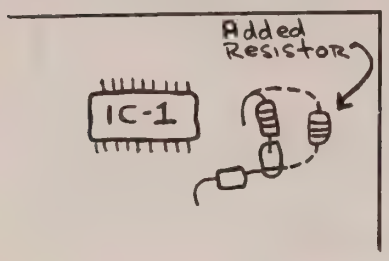

fig. 1

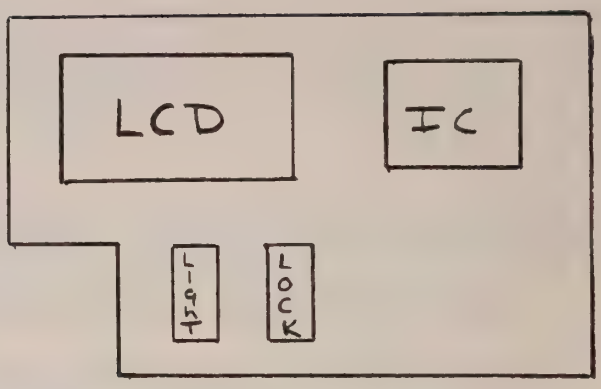

fig 2

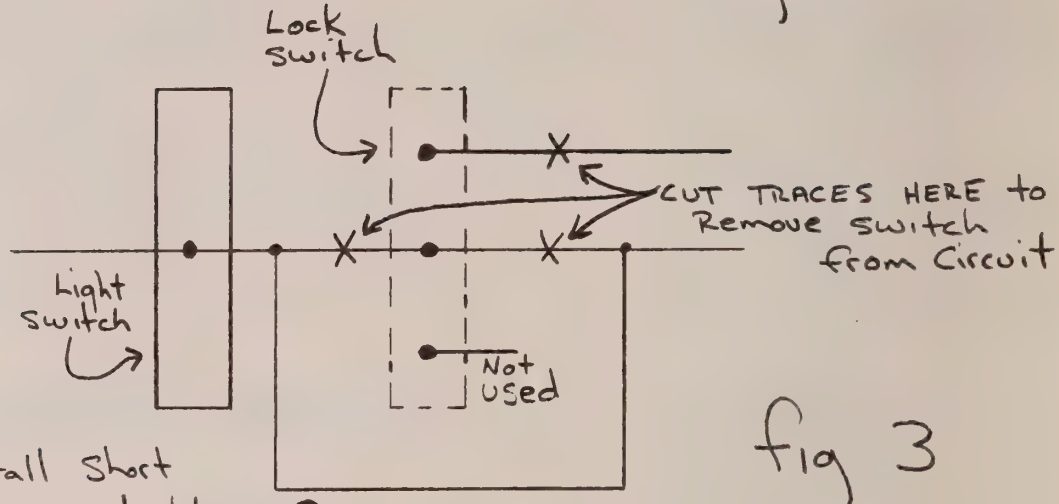

fig 3

Install Short Jumper so light will work

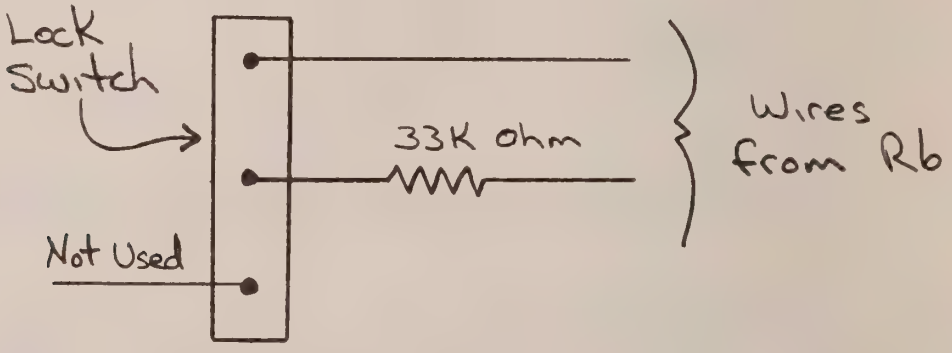

fig 4

My thanks go to Jim for sharing this modification with us all. I also want to give credit to Monitoring Times for figure 1 and to David Cook of Oklahoma City who submitted the original modification to MT. Watch "New Product Review" and this column for further information on this interesting modification.

'til next time

Steve

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VHF MARINE

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Emmett L. Baxter, Jr., 4122 Granby St., Norfolk, VA 23504

Hello and welcome to your September 1986 VHF Marine Column.

Last month the first "Marine Radio Profile" appeared in this column. It was 1/2 of the state of Massachusetts. Well it looks like we will have to split up the profiles even more as not to exceed a total of three (3) pages for the whole column. So this month as much of the balance will appear as possible.

Our first report comes in from James (NY-152).

The following patrol boats are at the U.S.Coast Guard Station at Oswego,N.Y.; 43390 - 43 ft. patrol boat, 224913 - 22 ft.patrol boat, 14422 - 14 ft.boat on trailer.

Oswego County Sheriff Boats are using C.B.Channels 18 & 21 (Singlesideband) and 156.900 & 157.050 VHF Marine.

They have the following boats:

Unit 317 - 19 ft. Outboard located at Oswego Sheriff's Building,state route 481 Oswego,N.Y.,on trailer to be moved all over the county as needed.

Unit 330 - 19 ft.Imperial Outboard located at Oneida Lake.

Unit 320 - 26 ft.PennYan Cabin Cruiser located at U.S.C.G.Station at Oswego,on Lake Ontario.

Unit 319 - 26 ft. Merc-Cruiser Cabin Cruiser located at U.S.C.G. Station Oswego will be moved to Port Ontario as soon as the dock is finished.

The Sheriff's Department also has a two-man Helicopter called

"Charley One" which works with the Coast Guard as needed.
Oswego County Sheriff Boats are also using Police Frequencies Ch.1 - 155.250 & Ch.2 - 155.370.
*****This is James first report & I hope the first of many to follow.

Remember to send in your information to help keep this column going and strong.

MARINE RADIO PROFILE: (MASSACHUSETTS) (CON'T)
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PIGEON COVE:
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Pigeon Cove Marine Supplies - WXZ-262 - 156.800,157.025
PLYMOUYH:
==========
Plymouth,Town of - KVL-903 - 156.425,156.600,156.800
Plymouth Marine Inc. - WHG-590 - 156.425,156.450,156.800
Costa,Mario - KXS-351 - 156.450,156.800
Souza,John M. - WHH-389 - 156.450,156.800
Capt John Boats Inc. - WHU-325 - 156.800,157.025
PROVINCETOWN:
==========
Cape Cod Trading Co. - WHG-690 - 2097.9 kc.,2183.4 kc.,4126.4 kc.,
8292.5 kc.
156.450,156.800
Provincetown,Town of - WHD-542 - 156.450,156.800
QUINCY:
==========
Electrocom Inc. - WRA - 4145.0 kc.,6220.0 kc.,8292.5 kc.
156.325,156.800,156.975
Boston Harbor Marina - WHD-529 - 156.425,156.500,156.800
Charters Unlimited - WQA-290 - 156.425,156.575,156.800
Anchor Boat Works - WQZ-424 - 156.425,156.450,156.800
New England Telephone - KCD-817 - 156.800,161.900,161.950
Massachusetts Dept. of - WRD-634 - 156.650,156.800
REVERE:
==========
Broad Sound Tuna Club - WHU-656 - 156.450,156.800
ROCKPORT:
==========
Sandy Bay Yacht Club - WHU-280 - 156.425,156.800
Rockport,Town of - KVY-736 - 156.450,156.800
SOUTH BOSTON:
==========
Texaco Mineral Co. - KMD - 4145.0 kc.,6220.0 kc.,8292.5 kc.,
12433.7 kc.,16591.6 kc.,22125.4 kc.
156.500,156.800,156.900
S.DENNIS:
==========
Hall Oil Co.,Inc. - WQZ-331 - 156.800,157.025
SALEM:
==========
North East Surf Patrol - KXS-258 - 2097.9 kc.,2183.4 kc.
156.475,156.600,156.800
KSK-231 - 156.475,156.600,156.800,157.050,
157.100,157.150
Miller Wharf Marina - KPB-595 - 156.425,156.450,156.800
WQB-368 - 156.425,156.450,156.800
Salem,City of - KZA-925 - 156.425,156.500,156.550,156.600,156.800
WHF-829 - 156.600,156.800
Pickering Wharf Marina - WRD-637 - 156.425,156.450,156.800
Barnegat Transportation - KYU-245 - 156.450,156.800
Fred J.Dion Yachts - WHF-815 - 156.450,156.800
Eastern Point Pilots - KQU-626 - 156.600,156.800
Bakers Island Association - KVY-735 - 156.600,156.800

SALISBURY:
==========
TCS Communications - WRD-626 - 156.450,156.550,156.800
SANDWICH:
=========
Hyannis Seafood Corp. - KYT-544 - 2097.9 kc.,2183.4 kc.,4145.0 kc.,
6220.0 kc.,8292.5 kc.,12430.6 kc.,
16588.5 kc.,22125.4 kc.
156.800,156.975
SCITUATE:
=========
George Mobey Inc. - KYR-737 - 4145.0 kc.,6220.0 kc.,8292.5 kc.,
12430.6 kc.
156.450,156.800
Harbor Mooring Service - WQB-840 - 156.425,156.450,156.600,156.800
SO HAMILTON:
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Bruce H.Collins - KXS-330 - 156.350,156.450,156.600,156.800
SOMERSET:
=========
Gladding Hearn Shipbuilders - KPB-626 - 156.450,156.800
SOUTH CHATHAM:
==============
RCA Global Communications - WCC - 130.35 kc.,143.00 kc.,147.50 kc.,
436.00kc.,442.00 kc.,460.00 kc.,
500.00 kc.,2036.0 kc.,4238.0 kc.,
4268.0 kc.,4331.0 kc.,4356.0 kc.,
4356.5 kc.,6333.5 kc.,6337.0 kc.,
6376.0 kc.,6500.5 kc.,6501.0 kc.,
6504.5 kc.,8511.0 kc.,8586.0 kc.,
8630.0 kc.,8711.5 kc.,8715.0 kc.,
12925.5 kc.,12961.5 kc.,13033.5 kc.,
13077.5 kc.,13078.0 kc.,13081.5 kc.,
13090.0 kc.,16904.9 kc.,16933.2 kc.,
16972.0 kc.,16973.45 kc.,
17203.5 kc.,17204.0 kc.,17207.5 kc.,
17216.0 kc.,22348.5 kc.,22366.5 kc.,
22518.0 kc.,22521.0 kc.,22567.5 kc.,
22568.0 kc.,22571.5 kc.,22580.0 kc.
SOUTH YARMOUTH:
===============
A B C Towing Corp. - WQZ-383 - 156.350,156.800
Niagara Communications - KQU-634 - 156.800,161.825,162.000
WEST BARNSTABLE:
================
Walter Ungermann - WQA-791 - 156.800,156.900
WEST DENNIS:
============
Bass River Marina - KXS-256 - 156.425,156.800
WEST WAREHAM:
=============
Wareham Boatyard Inc. - WHH-252 - 156.425,156.800
WEST YARMOUTH:
==============
Donald R. Haaker - WQB-874 - 156.425,156.500,156.800

WAKEFIELD:
==========
Air Vue Inc. - WRV-517 - 156.450,156.800
WAREHAM:
========
Warrs Marine Inc. - KXE-241 - 156.425,156.450,156.800
Point Independance Yachts - WXZ-518 - 156.575,156.800
WEST DENNIS:
============
Champion Line Inc. - KYP-979 - 156.800,156.900
WESTON:
=======
Rum Cay Diving Club - KPB-660 - 6220.0 kc.,8292.5 kc.,12430.6 kc.

WESTPORT HARBOR:
==========
High Seas Corp. - WQB-493 - 2097.9 kc.,2183.4 kc.,4126.4 kc.,
4145.0 kc.,4420.8 kc.,6220.0 kc.,
8295.6 kc.,12433.7 kc.
156.800,156.950
Westport Boat Service - KEB-508 - 2097.9 kc.,2183.4 kc.,4126.4 kc.,
6220.0 kc.
156.800,156.950

WEYMOUTH:
==========
Capeway Fish Market - WQA-240 - 156.800,156.900

WINTHROP:
==========
Harbor Electronics - WRD-782 - 156.350,156.425,156.800
Ward Marine - WHG-594 - 156.425,156.800
Cottage Park Yacht Club - WRD-588 - 156.425,156.800
Pleasant Park Yacht - WXZ-501 - 156.425,156.800

WOODS HOLE:
==========
Woods Hole Oceanography - KXC-713 - 2097.9 kc.,2183.4 kc.,4140.9 kc.,
6211.8 kc.,8282.6 kc.,12422.4 kc.,
16566.4 kc.,22095.9 kc.
156.800,156.950
Woods Hole Marthas - KXS-295 - 156.350,156.800
Olmstead Marine Service - KVR-441 - 156.450,156.800

MISC LISTINGS:
==========
Harbor Electronics - KU-3472 - 156.350,156.425,156.800
Elco Electronics - KPB-654 - 156.425,156.450,156.800
Harbor Master - KU-9741 - 156.425,156.500,156.600,156.800
Packer Marine - KU-2522 - 156.450,156.800
WRD-779 - 156.450,156.800
Barnegat Transportation - KU-3876 - 156.450,156.800
Curtis Marine Electronics - KV-9103 - 156.450,156.800
Little Harbor Boat Yard - KZ-2483 - 156.450,156.600,156.800
New England Power - KR-9541 - 156.800,156.900
New England Telephone - KJC-753 - 2183.4 kc.,2367.4 kc.,2391.4 kc.,
2407.4 kc.
156.800,157.300,157.350
Larrys Tackle Shop - KQ-7119 - 156.000,156.425,156.450,156.800
Falmouth Marine - KS-9995 - 156.000,156.425,156.450,156.800
Island Commuter Corp. - KC-9505 - 156.500,156.800
North East Surf Patrol - KX-7461 - 156.000,156.475,156.600,156.800,
157.050,157.100,157.150
Gun and Tackle Inc. - KX-7469 - 156.000,156.475,156.800
Cape Cod Marine Service - KX-7484 - 156.000,156.450,156.800
WHF-903 - 156.450,156.800
Salem,City of - KX-7490 - 156.000,156.425,156.600,156.800
Attlebore,City of - KA-57537 - 156.150
Gulf Oil Communications - KY-5562 - 156.325,156.800,156.975
Massachusetts Commonwealth - KF-8611 - 156.425,156.800,156.850,157.025
Commans Jr.,William - KEB-215 - 156.450,156.800,157.025
Marion,Town of - WHH-300 - 156.425,156.450,156.600,156.800
Shell Communications - KO-6044 - 156.800,156.900

Our last report comes from James (Md.-067). James sent in some corrections for the NOAA VHF Weather Channels listed in the column dealing with the Fifth Coast Guard District. His information is as follows;

Maryland:	Baltimore	- Ch. 2 - 162.400
	Hagerstown	- Ch. 3 - 162.475
	Salisbury	- Ch. 3 - 162.475
Virginia:	Heathsville	- Ch. 2 - 162.400
	Lynchburg	- Ch. 1 - 162.550
	Norfolk	- Ch. 1 - 162.550

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          Richmond              - Ch. 3 - 162.475
          Roanoke               - Ch. 3 - 162.475
North Carolina: Ashville        - Ch. 2 - 162.400
                Cape Hatteras   - Ch. 3 - 162.550
                Charlotte       - Ch. 3 - 162.475
                Fayetteville    - Ch. 3 - 162.475
                New Bern        - Ch. 2 - 162.400
                Raleigh/Durham- Ch. 1 - 162.550
                Rocky Mount     - Ch. 3 - 162.475
                Wilmington      - Ch. 1 - 162.550
                Winston-Salem - Ch. 2 - 162.400
District of Columbia: Washington - Ch. 1 - 162.550

NOAA Weather Frequencies: Ch. 1 - 162.550 Mhz.   Ch. 5 - 162.450 Mhz.
========================= Ch. 2 - 162.400 Mhz.   Ch. 6 - 162.500 Mhz.
                          Ch. 3 - 162.475 Mhz.   Ch. 7 - 162.525 Mhz.
                          Ch. 4 - 162.425 Mhz.
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I hope that Jim will continue to keep us updated on frequencies in the fifth Coast Guard District.

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```
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WA  074 - BEVERLY LYSON;N 5704 ELGIN;SPOKANE;WA;99205
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MEMBERSHIP CARDS AND BADGES

RCMA has no badges, decals, or membership cards for sale or distribution. The label on your newsletter is your membership card. While other clubs may have gimmicks or commercial good deals, our 'good deal' is your newsletter. You determine its content because you write it.

MAILING PROCEDURES

The newsletter mailed each month has a cover date for the following month. This practice is followed so that the US Post Office can deliver your issue no later than the first of the month designated on the cover.

New members whose applications are received before the end of the month will begin receiving the newsletter the following month. The first issue will be dated the month after that — as described above.

RENEWAL PROCEDURES

During the month your membership — and therefore your newsletter delivery — is due to expire, you will receive a renewal notice in the form of a postcard. It contains all the information you need to continue receiving the newsletter.

Renewal checks and new membership applications received by RCMA's General Manager, P.O. Box 542, Silverado, CA 92676, are processed for deposit on a weekly basis. Actual computer updating is done at the end of each month. If your check/MO is received after this cut-off date, you will miss the next issue of the newsletter and your new renewal date will be moved back accordingly.

PRORATED MEMBERSHIPS

Due to postage costs and other considerations, membership applications or renewals for any sum less than the current rate are prorated accordingly. This means that the renewal date will be due in less than a year. Please do not send more money to finish the year; just renew when your prorated date comes up.

Also because of postage costs, RCMA cannot comply with member requests to supply back issues free of additional charge (see the monthly Calendar section regarding ordering of back issues). If a late renewal results in a missed issue, the newsletter can be ordered from RCMA's secretary.

ADDRESS CHANGES

MEMBER notifications of address changes are also updated at the end of each month. If this type of address change notice arrives after the cut-off date, the mailing label will not reflect the new address until the following month.

The newsletter is mailed 3rd class under a bulk mail permit. When a member's address change is supplied by the POST OFFICE (instead of by the member), the charge to the club is 30¢.

SPECIAL FREQUENCY REQUESTS

Get in touch with your local RCMA group (see monthly Calendar section for chapter listings) or use the Contact/Information Wanted column for frequencies in your area. RCMA is not yet set up for national distribution of frequencies, although ultimately, the 'big picture' could include copies of the FCC and IRAC data bases, a fast computer, and software to select and sort in any order.

Contributions of frequencies and other material must be sent to the appropriate newsletter editor. (Editors use their own discretion in printing material sent them by non-members.) Data sent to P.O. Box 4563 is always subject to delay and sometimes cannot be forwarded because of postage costs.

DISCLAIMER

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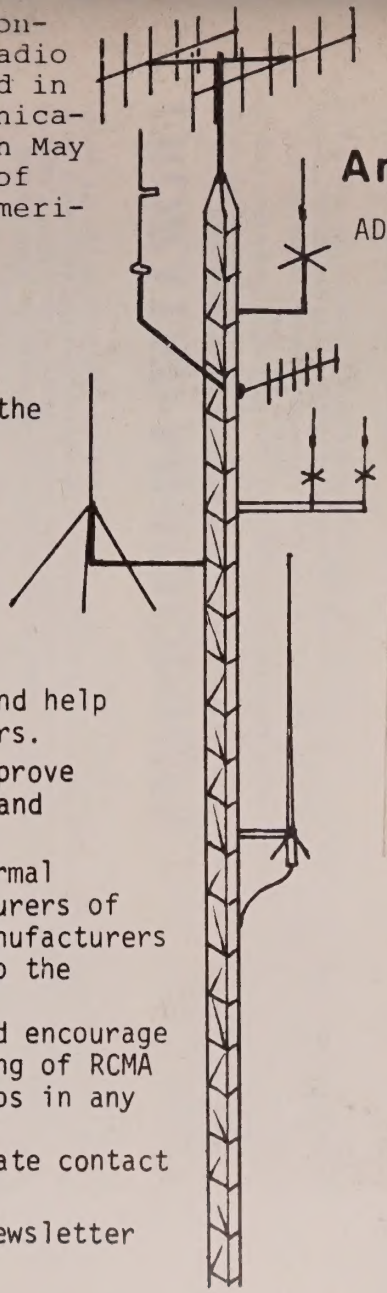
PLEASE REMEMBER — When writing to RCMA for any reason, include your membership number. Use it on your correspondence, checks, or money orders. RCMA tries hard to be responsive to your questions/problems. Using your membership number when you write helps us be of help to you.

The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



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